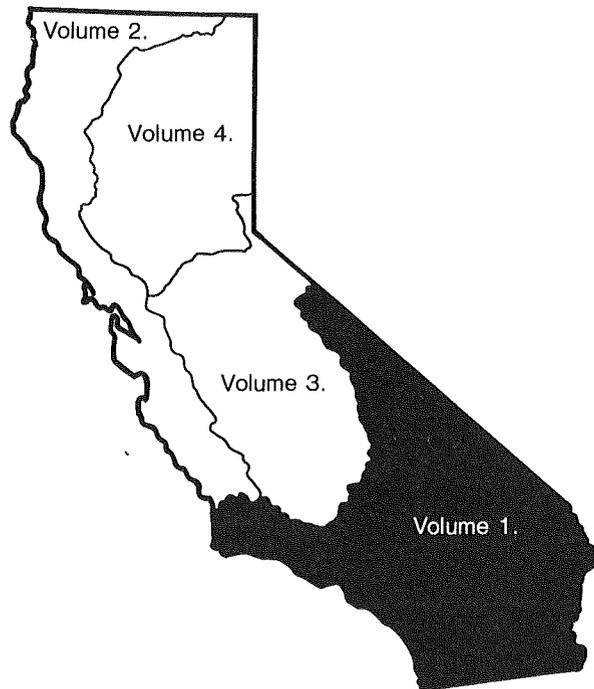




Water Resources Data California Water Year 1991

Volume 1. Southern Great Basin from Mexican Border to Mono Lake Basin, and Pacific Slope Basins from Tijuana River to Santa Maria River



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-91-1
Prepared in cooperation with the California Department of
Water Resources and with other agencies

CALENDAR FOR WATER YEAR 1991

1990

OCTOBER							NOVEMBER							DECEMBER						
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1991

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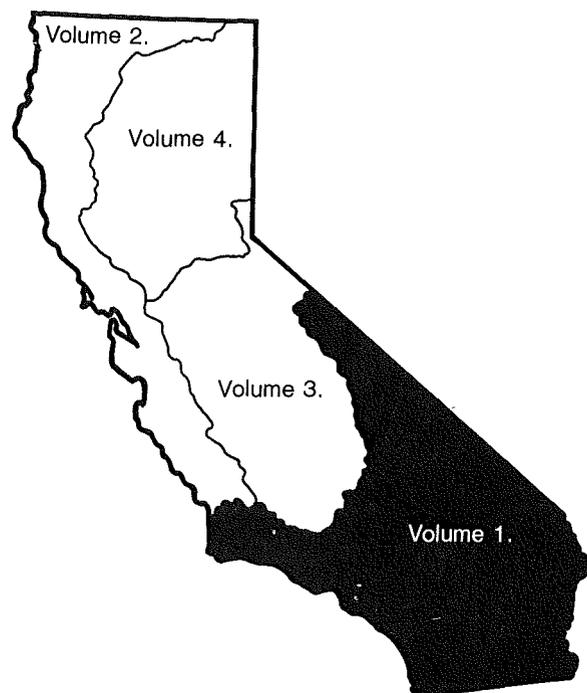
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Water Resources Data California Water Year 1991

Volume 1. Southern Great Basin from Mexican Border to
Mono Lake Basin, and Pacific Slope Basins
from Tijuana River to Santa Maria River

by R.M. Jensen, E.B. Hoffman, J.C. Bowers, and J.R. Mullen



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-91-1
Prepared in cooperation with the California Department of
Water Resources and with other agencies

U.S. DEPARTMENT OF THE INTERIOR

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U.S. GEOLOGICAL SURVEY

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2800 Cottage Way
Sacramento, CA 95825

PREFACE

This volume of the annual hydrologic data report of California is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for California are contained in five volumes:

- Volume 1. Southern Great Basin from Mexican Border to Mono Lake Basin and Pacific Slope Basins from the Tijuana River to Santa Maria River
- Volume 2. Pacific Slope Basins from Arroyo Grande to Oregon State Line except Central Valley
- Volume 3. Southern Central Valley Basins and The Great Basin from Walker River to Truckee River
- Volume 4. Northern Central Valley Basins and The Great Basin from Honey Lake Basin to Oregon State Line
- Volume 5. Ground-water data

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policy and established guidelines, the individuals contributing significantly to the collection, processing, and tabulation of the data are given on page V.

This report was prepared in cooperation with the California Department of Water Resources and with other agencies, under the general supervision of John M. Klein, District Chief, California.

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SURFACE-WATER AND WATER-QUALITY STATIONS
IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

IX

[Letters after station name designate type of data collected: (d), discharge;
(l), elevation, gage heights, or contents; (c), chemical; (b), biological; (p), precipitation;
(g), gage height; (t), water temperature; and (s), sediment]

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Sespe Creek near Wheeler Springs (d).....	11111500	250
Sespe Creek near Fillmore (d).....	11113000	251
Santa Paula Creek near Santa Paula (d).....	11113500	253
Santa Clara River at Montalvo (ds).....	11114000	254
VENTURA RIVER BASIN		
Ventura River near Ventura (ds).....	11118500	256
CARPINTERIA CREEK BASIN		
Carpinteria Creek near Carpinteria (d).....	11119500	259
MISSION CREEK BASIN		
Mission Creek near Mission Street, at Santa Barbara (d).....	11119750	261
ARROYO BURRO BASIN		
Arroyo Burro at Santa Barbara (d).....	11119780	262
ATASCADERO CREEK BASIN		
Atascadero Creek:		
Maria Ygnacio Creek at University Drive, near Goleta (d).....	11119940	263
Atascadero Creek near Goleta (d).....	11120000	264
SAN JOSE CREEK BASIN		
San Jose Creek near Goleta (dc).....	11120500	265
San Jose Creek at Goleta (d).....	11120510	267
CARNEROS CREEK BASIN		
Carneros Creek:		
Tocolotito Creek near Goleta (d).....	11120530	268
SANTA YNEZ RIVER BASIN		
Santa Ynez River at Jameson Lake, near Montecito (d).....	11121000	269
Santa Ynez River above Gibraltar Dam, near Santa Barbara (d).....	11122000	270
Santa Ynez River below Gibraltar Dam, near Santa Barbara (d).....	11123000	271
Santa Ynez River below Los Laureles Canyon, near Santa Ynez (dc).....	11123500	272
Santa Cruz Creek near Santa Ynez (d).....	11124500	274
Lake Cachuma near Santa Ynez (l).....	11125500	275
Alisal Creek:		
Alamo Pintado Creek near Solvang (d).....	11128250	276
Alisal Reservoir near Solvang (l).....	11128300	277
Santa Ynez River at Solvang (d).....	11128500	278
Zaca Creek near Buellton (d).....	11129800	279
Salsipuedes Creek near Lompoc (dc).....	11132500	280
Santa Ynez River at narrows, near Lompoc (d).....	11133000	283
Miguelito Creek at Lompoc (dc).....	11134800	284
SAN ANTONIO CREEK BASIN		
San Antonio Creek at Los Alamos (d).....	11135800	286
San Antonio Creek near Casmalia (dc).....	11136100	287
SANTA MARIA RIVER BASIN		
Cuyama River (head of Santa Maria River) below Buckhorn Canyon, near Santa Maria (dc).....	11136800	291
Sisquoc River near Sisquoc (dc).....	11138500	293
Sisquoc River near Garey (d).....	11140000	295
Bradley ditch near Donovan Road, at Santa Maria (d).....	11140600	296
Orcutt Creek near Orcutt (dc).....	11141050	297

DISCONTINUED GAGING STATIONS

The following continuous record streamflow stations in California have been discontinued or converted to partial-record stations. Daily records were collected and are stored in WATSTORE for the period of record shown for each station.

Station No.	Station name	Drainage area (mi ²)	Period of record
09424050	Chemehuevi Wash tributary near Needles	2.04	1960-62
09428530	Arch Creek near Earp	1.52	1961-71
10250600	Wildrose Creek near Wildrose station	23.7	1961-73, 1975
10250800	Darwin Creek near Darwin	173	1963-89
10251000	Big Dip Creek near Stovepipe Wells	.95	1963-69
10251100	Salt Creek near Stovepipe Wells	--	1974-88
10251300	Amargosa River at Tecopa	3,090	1962-72, 1974-83
10251350	Horsethief Creek near Tecopa	3.06	1961-70
10252300	China Spring Creek near Mountain Pass	.94	1961-72
10252330	Wheaton Wash near Mountain Pass	10.2	1965-68
10253080	Sunflower Wash near Essex	3.04	1963-70
10253320	Quail Wash near Joshua Tree	100	1964-71
10253350	Fortynine Palms Creek near 29 Palms	8.55	1963-71
10253540	Corn Springs Wash near Desert Center	24.1	1964-71
10253600	Eagle Creek at Eagle Mountain	7.74	1961-66
10255200	Myer Creek tributary near Jacumba	.11	1966-70
10255700	San Felipe Creek near Julian	89.2	1958-83
10255800	Coyote Creek near Borrego Springs	144	1951-83
10255820	Yaqui Pass Wash near Borrego	.041	1965-69
10255850	Vallecito Creek near Julian	39.7	1964-83
10256000	Whitewater River at White Water	57.5	1949-80
10256050	Whitewater Municipal West Company diversion at White Water	--	1966-70, 1971-73, 1975-81
10256200	San Gorgonio River near Banning	14.8	1975-81
10256300	San Gorgonio River at Banning	44.2	1981-82
10256400	San Gorgonio River near White Water	154	1966-73, 1975-79
10257500	Falls Creek near White Water	4.14	1922-27, 1928-31
10257710	Chino Canyon Creek near Palm Springs	3.88	1975-85
10257800	Long Creek near Desert Hot Springs	19.6	1963-71
10258030	Tahquitz Creek at Palm Springs	--	1983
10258100	Palm Canyon Creek tributary near Anza	.47	1967-73
10259600	Cottonwood Wash near Cottonwood Spring	.71	1960-72
10259920	Wasteway No. 1 near Mecca	--	1966-81
10260200	Pipes Creek near Yucca Valley	15.1	1958-71
10260400	Cushenbury Creek near Lucerne Valley	6.36	1957-71
10260820	West Fork Mojave River below Silverwood Lake	34.0	1981-83
10261900	Mojave River at Wild Crossing, near Helendale	957	1966-70
10264500	Little Rock Creek near Palmdale	78.0	1968
10264590	Cottonwood Creek near Rosamond	35.7	1965-72
10264710	Goler Gulch near Randsburg	41.3	1966-72
10264740	Cache Creek near Mojave	96.5	1965-72
10264750	Pine Tree Creek near Mojave	33.5	1958-79
10264770	Cottonwood Creek near Cantil	163	1966-72
10264870	Little Lake Creek near Little Lake	8.60	1964-68
10264878	Ninemile Creek near Brown	10.4	1962-71
10265200	Convict Creek near Mammoth Lakes	18.2	1925-78
10265500	Owens River near Round Valley	425	1909-23, 1928-40
10265700	Rock Creek at Little Round Valley, near Bishop	35.8	1925-78
10267000	Pine Creek at Division Box, near Bishop	36.4	1922-79
10268000	Owens River at Pleasant Valley, near Bishop	583	1918-40
10268700	Silver Canyon Creek near Laws	19.7	1930-78
10271210	Bishop Creek below powerplant No. 6, near Bishop	104	1936-90
10276000	Big Pine Creek near Big Pine	39.0	1921-78
10276002	Giroux Ditch lower below Big Pine	--	1975-78
10276500	Tinemaha Creek near Big Pine	27.3	1907-11
10277000	Birch Creek near Big Pine	11.7	1907-11
10277400	Owens River below Tinemaha dam, near Big Pine	1,964	1975-84
10277500	Owens River near Big Pine	1,976	1912-75
10278000	Taboose Creek near Aberdeen	11.2	1906-11
10278500	Goodale Creek near Aberdeen	11.2	1906-11
10281500	Oak Creek near Independence	24.1	1906-11
10281800	Independence Creek below Pi Canyon Creek, near Independence	18.1	1923-78
10282000	Independence Creek near Independence	18.8	1907-11
10282480	Mazourka Creek near Independence	15.6	1961-72
10284800	Inyo Creek near Lone Pine	1.54	1968-73
10285500	Tuttle Creek near Lone Pine	14.0	1909-11
10285700	Owens River at Keeler Bridge, near Lone Pine	2,604	1961-79
10286000	Cottonwood Creek near Olancho	40.1	1906-11, 1914-18, 1920-38, 1960-78
10286001	Cottonwood Creek penstock weir, near Lone Pine	--	1906-11, 1914-18, 1919-78
10286002	Cottonwood Creek diversion to powerhouse	--	1939-50, 1974, 1975-78

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
10287070	Mill Creek below Lundy Lake, near Mono Lake	18.1	1942-90
10287290	Rush Creek below Agnew Lake, near June Lake	245	1960-66, 1986-90
10287400	Rush Creek above Grant Lake, near June Lake	51.3	1937-79
10287900	Lee Vining Creek near Lee Vining	34.9	1935-79
10290000	Summers Creek near Bridgeport	8.26	1954-59
11010900	Wilson Creek tributary near Dulzura	.61	1968-73
11011900	Potrero Creek tributary near Barrett Junction	.78	1966-68
11012100	Miller Creek near Live Oak Springs	1.00	1962-64
11013000	Tijuana River near Dulzura	481	1937-90
11013600	Jamul Creek at Lee Valley, near Jamul	2.26	1985, 1987-88
11013700	Jamul Creek tributary near Jamul	2.47	1973
11014700	Telegraph Canyon Creek at Chula Vista	6.23	1973
11014850	Japacha Creek near Descanso	2.40	1965-67
11016000	Sweetwater River near Dehesh	112	1913-16
11021500	San Vicente Creek near Foster	66.0	1942
11022000	San Vicente Creek at San Vicente dam, at Foster	74.2	1937-41
11023200	San Clemente Canyon Creek at Miramar Naval Air Station	5.60	1973
11023250	Poway Creek near Poway	7.92	1970-75, 1978-87
11023310	Rattlesnake Creek at Poway	8.13	1970-89
11023315	Poway Creek tributary at Oak Knoll Road, near Poway	.93	1972-75
11023318	Pomerado Creek at Glenoak Road, near Poway	2.43	1970-75
11023320	Pomerado Creek at Poway Road, near Poway	4.14	1971-75
11023325	Beeler Creek at Pomerado Road, near Poway	5.46	1970-89
11023400	Carroll Creek near La Jolla	15.8	1985-86
11023450	Carmel Creek near Del Mar	1.11	1985-86
11023500	Santa Ysabel Creek near Santa Ysabel	12.5	1914
11024500	Black Canyon Creek near Mesa Grande	15.3	1914, 1923-24
11026000	Santa Ysabel Creek near San Pasqual	128	1957-80
11027000	Guejito Creek near San Pasqual	22.5	1947-82
11027500	Guejito Creek at San Pasqual	27.7	1915, 1917, 1947-56
11029000	San Dieguito River near San Pasqual	249	1956-65
11029500	San Dieguito River at Bernardo	269	1912-15
11030500	San Dieguito River near Del Mar	338	1984-89
11030730	Escondido Creek near Olivehain	64.6	1973
11031000	San Luis Rey River near Warner Springs	33.6	1913-15
11031500	Agua Caliente Creek near Warner Springs	19.0	1961-87
11033000	West Fork San Luis Rey River near Warner Springs	25.5	1913-15, 1957-86
11035000	San Luis Rey River at Lake Henshaw, near Mesa Grande	206	1912-22
11037650	Pauma Valley Water Company diversion near Pauma Valley	--	1966-70, 1972-81
11037700	Pauma Creek near Pauma Valley	11.0	1965-81
11037701	Pauma Creek and diversion near Pauma Valley	11.0	1965-81
11038500	San Luis Rey River near Pala	317	1909-11, 1913-15
11039100	San Luis Rey River tributary near Pala	1.01	1966-73
11040000	San Luis Rey River at Monserate Narrows, near Pala	373	1938-41, 1947-86
11040200	Keys Creek tributary at Valley Center	7.65	1970-82
11040500	San Luis Rey River at Bonsall	456	1912-15, 1984
11040700	San Luis Rey River below Moosa Canyon, near Bonsall	499	1985
11041000	San Luis Rey River near Bonsall	513	1930-80
11042520	Temecula Creek at Nigger Canyon, near Temecula	320	1923-48
11042600	Temecula Creek below Vail Dam	320	1978
11044500	Santa Margarita River near Fallbrook	644	1925-80
11044600	Santa Margarita River tributary near Fallbrook	.52	1962-65
11045000	Santa Margarita River near De Luz Station	705	1925-26
11046100	Las Flores Creek near Oceanside	26.6	1952-67, 1970-79
11046200	San Onofre Creek near San Onofre	34.6	1951-67
11046250	San Onofre Creek at San Onofre	42.2	1947-67, 1989
11046300	San Mateo Creek near San Clemente	80.8	1953-67
11046310	San Mateo Creek near San Onofre	91.9	1951-52
11046350	Cristianitos Creek near San Clemente	29.0	1951-67
11046370	San Mateo Creek at San Onofre	132	1947-67, 1984-85
11046500	San Juan Creek near San Juan Capistrano	106	1929-71, 1973, 1981-82
11046501	San Juan Creek near San Juan Capistrano plus canal	117	1955-71
11047200	Oso Creek at Crown Valley Parkway, near Mission Viejo	14.0	1970-81
11047300	Arroyo Trabuco at San Juan Capistrano	54.1	1973-77, 1984-89
11047500	Aliso Creek at El Toro	7.92	1931-80
11047700	Aliso Creek at South Laguna	34.4	1982-87
11048000	Peters Canyon Wash Line Road, near Santa Anita	92.0	1931-40
11048555	San Diego Creek at Campus Drive, near Irvine	--	1978-79, 1983-85
11049600	Greenspot Pipeline near Mentone	--	1972-73
11051600	Santa Ana River spreading diversion near Mentone	213	1952-77
11054000	Mill Creek near Yucaipa	42.4	1948-86
11054600	Crafton near Mentone	--	1972-79
11055000	Mill Creek near Mentone	50.5	1939-65
11056000	Santa Ana River near San Bernardino	306	1929-37, 1955-61
11056500	Little San Gorgonio Creek near Beaumont	1.74	1949-85
11057490	San Timoteo Creek at Loma Linda	125	1979-80

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11058600	Waterman Canyon Creek near Arrowhead Springs	4.65	1912-14, 1920-85
11059000	Warm Creek floodway at San Bernardino	75.1	1961-81
11059100	San Bernardino water quality control plant at San Bernardino	--	1973-82
11060300	Lytle Creek at channel, at San Bernardino	--	1929-30, 1932-57
11060500	Meeks and Daley Canal near Colton	--	1921-81
11062200	Fontana Union Water Co. Lytle Creek return flow channel near Fontana	--	1973-80
11062810	West San Bernardino County Water District Rialto diversion near Fontana	--	1981
11063000	Cajon Creek near Keenbrook	40.6	1920-71, 1978-83
11064000	Lytle Creek at Foothill Boulevard, near Rialto	--	1929-57
11065800	Warm Creek near Colton	198	1921-61
11065801	Warm Creek near Colton plus diversion	259	1920-61
11066050	Santa Ana River at Colton	740	1962-66
11066100	Lytle Creek west channel at Colton	--	1929-45
11066440	Santa Ana River at Mission Boulevard, at Riverside	808	1971-82
11066478	Riverside water quality control plant weir No. 1	--	1973-81
11066479	Riverside water quality control plant weir No. 2	--	1973-81
11066480	Riverside water quality control plant at Riverside narrows, near Arlington	--	1966-82
11066500	Santa Ana River at Riverside narrows, near Arlington	853	1929-73
11066550	Sheehan diversion at Riverside narrows, near Arlington	--	1964-65, 1967-68
11066950	Day Creek diversion near Etiwanda	--	1966-69, 1971
11067000	Day Creek near Etiwanda	4.56	1929-72
11068000	Santa Ana River at Auburndale Bridge, near Corona	1,010	1961-68
11069300	South Fork San Jacinto River tributary near Valle Vista	2.20	1962-67
11069500	San Jacinto River near San Jacinto	141	1920-91
11069501	San Jacinto River near San Jacinto plus canals	141	1949-81, 1983-89
11070000	Bautista Creek near Hemet	39.6	1948-69
11070050	Bautista Creek at Valle Vista	48.5	1970-87
11070232	East Fork Pigeon Pass Creek at Heacock Street, near Sunnymead	.48	1970-75
11070263	Unnamed creek tributary to Ferris Reservoir near Moreno Valley	.46	1989-91
11070375	San Jacinto River at railroad crossing weir, near Elsinore	562	1952-82, 1984
11070465	Salt Creek at Murrieta Road, near Sun City	--	1984
11070475	Salt Creek at railroad crossing reservoir, near Elsinore	122	1970-78
11072000	Temescal Creek near Corona	164	1929-80
11072200	Temescal Creek at Corona	249	1968-74, 1980-81
11073000	San Antonio Creek near Claremont	16.5	1917-72
11073200	San Antonio Creek below San Antonio Dam	26.9	1963-81
11073440	Chino Creek near Chino	107	1968-69
11073470	Cucamonga Creek near Upland	9.68	1929-75
11073500	Chino Creek near Prado	218	1929-40
11074500	Santa Ana River at county line, below Prado Dam	1,510	1919-42, 1945-60
11075620	Santa Ana River spreading diversion below Imperial Highway, near Anaheim	--	1974-86
11075730	Carbon Creek at Olinda	19.7	1931-38
11075740	Carbon Creek near Yorba Linda	20.1	1950-61
11077000	Santiago Creek near Villa Park	84.6	1921-63
11077001	Santiago Creek plus diversion near Villa Park	83.8	1921-31
11078100	Santa Ana River at Adams Avenue, near Costa Mesa	1,701	1974-77
11078110	Rubio Wash at Glendon Way	--	1973-75
11078120	Compton Creek at 120th Street	--	1974-75
11078130	Arcadia Wash at Grand Avenue	--	1974-75
11078140	Eaton Wash at Loftas Drive	--	1974-75
11078150	Limekiln Creek above Aliso Creek	--	1973-74
11078170	Puddingstone Creek below Puddingstone Dam	--	1974
11078190	Santa Fe diversion channel	--	1974
11078191	West Fork San Gabriel River below Cogswell Dam	--	1975
11080000	East Fork San Gabriel River at Camp Bonita	58.2	1928-32
11080500	East Fork San Gabriel River near Camp Bonita	84.6	1933-79
11081000	Bear Creek near Camp Rincon	28.2	1930-36
11081500	North Fork San Gabriel River at Camp Rincon	18.6	1930-36
11082000	West Fork San Gabriel River at Camp Rincon	104	1928-78
11083500	San Gabriel River near Azusa	214	1894, 1896-1959, 1961-66
11084000	Rogers Creek near Azusa	6.64	1918-62
11084500	Fish Creek near Duarte	6.36	1916-79
11085019	San Gabriel River below Valley Boulevard	--	1973-74
11086000	Dalton Creek near Glendora	7.24	1913-62
11086300	San Dimas Creek below San Dimas Dam	16.3	1957-78
11086400	San Dimas Creek near San Dimas	18.3	1917-56
11086500	Little Dalton Creek near Glendora	2.72	1939-68, 1970-71
11086990	San Jose Creek near El Monte	87.8	1965-78
11087100	Rio Hondo Creek at Whittier Narrows Dam	--	1966-70
11087195	San Jose Creek near Whittier	88.7	1929-64
11087500	San Gabriel River at Pico	447	1929-78
11088000	San Gabriel River at Spring Street, near Los Alamitos	472	1937-51, 1953-79
11089000	Brea Creek at Fullerton	23.6	1931-69

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11090000	Fullerton Creek at Fullerton	7.50	1936-64
11090200	Fullerton Creek at Richman Avenue, at Fullerton	12.1	1960-77, 1979-81
11090500	Coyote Creek near Artesia	120	1930-63
11090700	Coyote Creek at Los Alamitos	150	1964-79
11092450	Los Angeles River at Sepulveda Dam	158	1932-79
11093000	Pacoima Creek near San Fernando	28.3	1917-79
11093490	North Fork Mill Creek near Lanada	5.80	1966-73
11093500	Mill Creek near Colby Ranch	21.7	1931-34
11094000	Big Tujunga Creek below Mill Creek, near Colby Ranch (formerly Tugunga Creek)	64.9	1948-71
11094500	Big Tujunga Creek near Colby Ranch (formerly Tujunga Creek)	67.5	1931-50
11095000	Fox Creek near Colby Ranch	9.22	1931-37
11095500	Big Tujunga Creek near Sunland (formerly Tujunga Creek)	106	1917-77
11096000	Haines Creek near Tujunga	1.26	1917-34, 1936-61
11096500	Little Tujunga Creek near San Fernando	21.1	1929-73
11097500	Los Angeles River at Los Angeles	514	1930-79
11098500	Los Angeles River near Downey	599	1928-78
11099500	Sawpit Creek near Monrovia	5.21	1916-61
11100000	Santa Anita Creek near Sierra Madre	9.71	1917-70
11100500	Little Santa Anita Creek near Sierra Madre	1.84	1916-62, 1979
11101000	Eaton Creek near Pasadena	6.47	1918-66
11101380	Alhambra Wash at Klingerman Street, near Montebello	15.2	1976-79
11101500	Rio Hondo near Montebello	116	1929-78
11102000	Mission Creek near Montebello	4.16	1930-77, 1983
11102500	Rio Hondo near Downey	143	1928-79
11103500	Ballona Creek near Culver City	89.5	1928-78
11106000	Calleguas Creek at Camarillo	168	1929-31, 1955-58
11106400	Conejo Creek above Highway 101, near Camarillo	64	1973-83
11106500	Conejo Creek near Camarillo	69	1928-31
11107000	Honda Barranca near Somis	2.5	1955-63
11107500	Beardsley Wash near Somis	13	1954-58
11107745	Santa Clara River above railroad station, near Lang	157	1950-68, 1970-77
11107860	Bouquet Creek near Saugus	51.6	1971-73, 1975, 1977
11107922	South Fork Santa Clara River at Saugus	43.4	1976-77
11108000	Santa Clara River near Saugus	411	1930-55
11108145	Castaic Creek near Saugus	184	1947-76
11109000	Santa Clara River near Piru	645	1928-32
11109100	Piru Creek below Thorn Meadows, near Stauffer	22.5	1972-78
11109200	Middle Fork Lockwood Creek near Stauffer	5.50	1972-78
11109250	Lockwood Creek at gorge, near Stauffer	58.7	1972-81
11110000	Piru Creek near Piru	437	1912-13, 1928-56, 1969-75
11112500	Fillmore Irrigation Company canal near Fillmore	--	1940-51, 1972-83
11113900	Saticoy diversion near Saticoy	--	1969-81, 1983-87
11114500	Matilija Creek above reservoir, near Matilija Hot Springs	50.7	1948-69
11115500	Matilija Creek at Matilija Hot Springs	54.6	1928-88
11116000	North Fork Matilija Creek at Matilija Hot Springs	15.6	1929-32, 1934-73, 1974-83
11116500	Ventura River near Ojai	70.7	1912-14, 1922-24, 1983-84
11116550	Ventura River near Meiners Oaks	76.4	1959-79, 1981-82, 1984-88
11117000	San Antonio Creek near Ojai	33.7	1928-32
11117600	Coyote Creek near Oak View	13.2	1959-88
11117800	Santa Ana Creek near Oak View	9.11	1959-88
11118000	Coyote Creek near Ventura	41.2	1928-32, 1934-58, 1970-82
11118400	Ventura River diversion near Ventura	--	1970-83, 1988-90
11118501	Ventura River near Ventura plus diversion	188	1939-89
11119660	San Ysidro Creek at Montecito	3.07	1980-83
11119700	Sycamore Creek at Santa Barbara	3.41	1971-72, 1980
11119760	Victoria Street drain at Olivos, at Santa Barbara	0.625	1970-77, 1979
11119900	Atascadero Creek at Puente Road, near Goleta	3.86	1971-72
11120520	San Pedro Creek at Goleta	3.21	1971-72
11120550	Gaviota Creek near Gaviota	18.8	1967-86
11120600	Jalama Creek near Lompoc	20.5	1966-82
11120700	Canada Honda Creek near Lompoc	3.09	1959-62
11120800	Canada Honda Creek near Point Arguello	8.47	1959-62
11124000	Santa Cruz Creek above Stuke Canyon	64.9	1947-52
11125000	Cachuma Creek near Santa Ynez	23.8	1951-62
11126000	Santa Ynez River near Santa Ynez	422	1929-31, 1933-76
11126500	Santa Agueda Creek near Santa Ynez	55.8	1941-71, 1977-78
11127000	San Lucas Creek near Santa Ynez	3.2	1953-54
11127500	Zanja De Cota near Santa Ynez	13.8	1955-61
11128000	Santa Ynez River at Grand Avenue, near Santa Ynez	513	1955-65, 1989

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11128400	Alisal Creek near Solvang	12.3	1955, 1957-72
11129000	Nojoqui Creek near Buellton	15.1	1953-54
11129500	Santa Ynez River at Buellton	611	1955-59
11130000	Zaca Creek at Buellton	39.4	1941-63
11130500	Santa Ynez River near Buellton	668	1952-74
11131000	Santa Ynez River at Santa Rosa dam site, near Buellton	700	1955-64
11131500	Santa Ynez River at Coopers east fork, near Lompoc	708	1955-76
11132000	Santa Ynez River below Santa Rita Creek, near Lompoc	733	1955-62
11134000	Santa Ynez River at H Street, near Lompoc	815	1947-62
11134500	Santa Ynez River at 13 Street, near Lompoc	820	1955-75
11135000	Santa Ynez River at Pine Canyon, near Lompoc	884	1941-46, 1964-83
11135500	Santa Ynez River at barrier, near Surf	895	1947-65
11136000	San Antonio Creek at Harris	93.7	1941-55
11136050	San Antonio Creek above Barka slough, near Orcutt	114	1985-87
11136150	San Antonio Creek tributary near Casmalia	.28	1947-70
11136400	Wagon Road Creek near Stauffer	17.9	1972-78
11136480	Reyes Creek near Ventucopa	4.62	1972-78
11136500	Cuyama River near Ventucopa	89.9	1945-58
11136650	Aliso Canyon Creek near New Cuyama	16.1	1964-72
11137000	Cuyama River near Santa Maria	904	1930-62
11137400	Alamo Creek near Nipomo	83.3	1959-78
11137900	Huasna River near Arroyo Grande	10.3	1959-86
11138100	Cuyama River below Twitchell Dam	1,132	1959-83
11139000	La Brea Creek near Sisquoc	93.6	1944-73
11139350	Foxed Creek near Sisquoc	16.8	1966-73
11139500	Tepusquet Creek near Sisquoc	28.7	1944-87
11140800	Blosser Ditch near Donovan Road, at Santa Maria	--	1972-76

DISCONTINUED LAKES AND RESERVOIRS

The following continuous-record lake stations in California have been discontinued. Daily records were collected and are stored in WATSTORE for the period of record shown for each location.

Station No.	Station name	Drainage area (mi ²)	Period of record
10287000	Mono Lake near Mono Lake	785	1912-90
11013200	Rodriguez Reservoir at Rodriguez Dam, Baja California, Mexico	977	1937-90
11117900	Lake Casitas near Casitas Springs	38.6	1986-87

DISCONTINUED WATER-QUALITY STATIONS

The following continuous water-quality stations in California have been discontinued. Daily records were collected and are stored in WATSTORE for the period of record shown for each location.

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record
10254970	New River at international boundary, at Calexico	--	C	1973-81
10256000	Whitewater River at White Water	57.5	S	1972
10261500	Mojave River at lower narrows, near Victorville	511	C	1975-82
10265150	Hot Creek near Casa Diablo Hot Springs	--	C,T	1983-88
10277400	Owens River below Tinemaha Dam, near Big Pine	1,964	C,T	1975-81
11013500	Tijuana River near Nestor	1,695	T,S	1970-71, 1976, 1978
11022500	San Diego River near Santee	377	T,S	1970-78
11023000	San Diego River at Fashion Valley, at San Diego	429	S	1984
11030500	San Dieguito River near Del Mar	338	S	1984
11042000	San Luis Rey River at Priory, near Oceanside	557	S	1969-78, 1984
11046000	Santa Margarita River at Ysidora	723	S	1969-71, 1973-74, 1978
11046250	San Onofre Creek at San Onofre	42.2	S	1982-83, 1988-89
11046370	San Mateo Creek at San Onofre	132	S	1984
11046500	San Juan Creek near San Juan Capistrano	106	T,S	1967-68, 1971, 1982

DISCONTINUED WATER-QUALITY STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record
11046530	San Juan Creek at La Novia Street bridge, at San Juan Capistrano	109	S	1987-88
11046550	San Juan Creek at San Juan Capistrano	117	T,S	1972-82, 1987
11047000	Arroyo Trabuco near San Juan Capistrano	35.7	T,S	1967, 1978
11047300	Arroyo Trabuco at San Juan Capistrano	54.1	S	1971-77, 1984
11048500	San Diego Creek at Culver Drive, near Irvine	41.8	T,S	1972-85
11048530	El Modena Irvine channel near Irvine	--	T,S	1975-79
11048540	Peters Canyon wash at Barranca Road, near Irvine	--	T,S	1975-79, 1983-85
11048550	San Diego Creek at Lane Road, near Irvine	--	T,S	1972-76
11048555	San Diego Creek at Campus Drive, near Irvine	--	T,S	1972-76, 1978-79, 1983-85
11051500	Santa Ana River near Mentone	210	T,S	1982-89
11056200	Santa Ana River at Waterman Avenue, at San Bernardino	339	T,S	1977, 1979
11057000	San Timoteo Creek near Redlands	118	T,S	1977-78
11057500	San Timoteo Creek near Loma Linda	125	S	1980
11059100	San Bernardino water quality control plant at San Bernardino	--	C	1973-75, 1977-80
11059300	Santa Ana River at E Street, near San Bernardino	541	C,S	1968-72, 1983
11066460	Santa Ana River at MWD crossing, near Arlington	852	C	1969-78
11066480	Riverside water quality control plant at Riverside narrows, near Arlington	--	C	1970-80, 1982
11066500	Santa Ana River at Riverside narrows, near Arlington	853	C,T	1968-69
11067890	Santa Ana River at Prado Park, near Corona	1,010	T,S	1976-80
11068000	Santa Ana River at Auburndale bridge, near Corona	1,010	C,T	1968
11070263	Unnamed creek tributary to Perris Reservoir near Moreno	.46	P	1990-91
11074000	Santa Ana River below Prado Dam	1,490	S	1973-82
11075600	Santa Ana River at Imperial Highway, near Anaheim	1,544	T,S	1973-77, 1979
11075620	Santa Ana River spreading diversion below Imperial Highway, near Anaheim	--	C,T	1974-85
11075755	Santa Ana River at Ball Road, at Anaheim	1,587	T,S	1977-80
11075760	Santa Ana River near Katella Avenue, at Orange	1,593	T,S	1974-76
11078000	Santa Ana River at Santa Ana	1,700	S	1968-88
11078100	Santa Ana River at Adams Avenue, near Costa Mesa	1,701	T,S	1974-76
11102250	Mission Creek below Whittier narrows dam	--	C	1956-70
11103000	Los Angeles River at Long Beach	827	C	1980-84
11103010	Los Angeles River at Willow Street Bridge, at Long Beach	831	C,T	1974-75, 1981
11104000	Topanga Creek at Topanga Beach	18.0	WQ,S	1982-88
11104400	Malibu Creek at Cornell	37.6	WQ,S	1983-88
11105410	Cold Creek at Piuma Road, near Monte Nido	7.73	WQ,S	1982-84, 1986, 1987, 1988
11105500	Malibu Creek at Crater Camp, near Calabasas	105	WQ,S	1082-88
11105850	Arroyo Simi near Simi	70.6	T,S	1970-71, 1974-78
11106550	Calleguas Creek at Camarillo State Hospital	248	T,S	1970-78
11108500	Santa Clara River at Los Angeles-Ventura county line	625	WQ,B,S	1969-88
11109550	Piru Creek above Frenchmans Flat	308	C	1972-80
11109600	Piru Creek above Lake Piru	372	C,T	1971-80
11109800	Piru Creek below Santa Felicia Dam	425	C	1969-70, 1974-80
11110000	Piru Creek near Piru	437	C,T	1970-71
11110500	Hopper Creek near Piru	23.6	T,S	1977-78
11113000	Sespe Creek near Fillmore	251	C,S	1967-78
11113500	Santa Paula Creek near Santa Paula	38.4	C	1969-80
11113900	Saticoy diversion near Saticoy	--	C,T	1969-71, 1982-87
11113910	Santa Clara River at diversion, near Saticoy	--	C	1971
11114000	Santa Clara River at Montalvo	1,594	S	1968-81, 1984-85
11117500	San Antonio Creek at Casitas Springs	51.2	T,S	1977-78
11118500	Ventura River near Ventura	188	S	1969-86
11120000	Atascadero Creek near Goleta	18.9	S	1982
11120510	San Jose Creek at Goleta	9.42	S	1982-85
11120530	Tecolotito Creek near Goleta	4.42	S	1982
11120600	Jalama Creek near Lompoc	20.5	T	1981-83
11120900	Canada Honda Creek at Pt Arguello	--	T	1981-83
11141000	Santa Maria River at Guadalupe	1,741	T,S	1969-70

Type of record: C (Conductivity); S (Sediment) T (Temperature); P (Precipitation); WQ (Water quality).

WATER RESOURCES DATA -- CALIFORNIA, WATER YEAR 1991

VOLUME 1--SOUTHERN GREAT BASIN FROM MEXICAN BORDER TO MONO LAKE BASIN,
AND PACIFIC SLOPE BASINS FROM TIJUANA RIVER TO SANTA MARIA RIVER

By R.M. Jensen, E.B. Hoffman, J.C. Bowers, and J.R. Mullen

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State and Federal agencies, obtains a large amount of data pertaining to the water resources of California each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the U.S. Geological Survey, the data are published annually in this report series entitled "Water Resources Data - California."

This volume of the report includes records on surface water in the State. Specifically, it contains (1) discharge records for 171 streamflow-gaging stations, 16 crest-stage partial-record streamflow stations, and 3 miscellaneous measurement stations; (2) stage and contents records for 24 lakes and reservoirs; (3) water-quality records for 23 streamflow-gaging stations and 4 partial-record stations; and (4) precipitation records for 16 stations. Records included for stream stages are only a small fraction of those obtained during the water year.

The series of annual reports for California began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format changed to one volume, including data on quantities of surface water, quality of surface and ground water, and ground-water levels. Beginning with the 1985 water year, a separate volume for ground-water levels and quality was published for California.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports Section, Box 25425, Building 810, Federal Center, Denver, CO 80225.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. Each report has an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CA-91-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (916) 978-4668.

COOPERATION

The U.S. Geological Survey and organizations of the State of California have had cooperative agreements for the systematic collection of records since 1903. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

California Department of Boating and Water Ways, William H. Ivers, Director.
 California Department of Water Resources, David N. Kennedy, Director.
 Carpinteria County Water District, Robert R. Lieberknecht, General Manager/Secretary.
 Casitas Municipal Water District, John Johnson, General Manager.
 Coachella Valley Water District, Thomas E. Levy, General Manager-Chief Engineer.
 Crestline-Lake Arrowhead Water Agency, Roxanne M. Holmes, General Manager.
 Desert Water Agency, Jack H. Oberle, General Manager.
 East Valley Water District, Robert Martin, General Manager.
 Eastern Municipal Water District, J. Andrew Schlange, General Manager.
 Goleta Water District, Robert Paul, General Manager.
 Imperial Irrigation District, Charles L. Shreves, General Manager.
 Los Angeles Department of Water and Power, Orville McCollom, Deputy Director.
 Mojave Water Agency, Larry Rowe, General Manager.
 Mono County, Energy Management Department, Daniel Lyster, Director.
 Montecito Water District, C. Charles Evans, General Manager-Chief Engineer.
 Orange County Water District, William R. Mills, Jr., General Manager.
 Pala Band of the Mission Indians, Robert Smith, Chairman.
 Pechanga Indian Reservation, Jennie Miranda, Spokeswoman.
 Rancho California Water District, John F. Hennigar, General Manager.
 Riverside County Flood Control and Water Conservation District, Kenneth L. Edwards, Chief Engineer.
 San Bernardino Valley Municipal Water District, G. Louis Fletcher, General Manager.
 San Bernardino Environmental Public Works Agency-Flood Control District, Ken Miller, Director.
 San Diego, City of, Milon Mills, Jr., Water Utilities Director.
 San Diego County Department of Public Works, Granville M. Bowman, Director.
 Santa Barbara, City of, Department of Public Works, David H. Johnson, Director.
 Santa Barbara County Flood Control and Water Conservation District, Phillip Demery, Flood Control Engineer-Manager.
 Santa Barbara County Water Agency, Robert Almy, Manager.
 Santa Maria Valley Water Conservation District, Maurice F. Twitchell, Secretary.
 Santa Ynez River Water Conservation District, William Laranjo, President.
 United Water Conservation District, Frederick J. Gientke, General Manager.
 Ventura County Public Works Agency, Arthur Goulet, Director.

Assistance in the form of funds or services was given by the Vandenberg Air Force Base, U.S. Air Force; Corps of Engineers, U.S. Army; Bureau of Land Management, Bureau of Reclamation, U.S. Department of the Interior; U.S. Department of Justice; Camp Pendleton Marine Corps Base, Marine Corps, and China Lake Naval Weapons Center, U.S. Navy.

The following organizations aided in collecting records: California Department of Water Resources, Southern California Edison Co., and United Water Conservation District.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

As is common in California, streamflow varied greatly in the 1991 water year--month by month and regionally. The variations are related to differences in precipitation, temperature, topography, and geology. Runoff during the 1991 water year in the area covered by this volume was 186 percent of the 1961-90 median (based on seven representative streamflow records). Total runoff, in percent of median, at selected stations in California is shown in figure 1. Runoff ranged from 548 percent of median in Sweetwater River near Descanso (station 11015000) to 89 percent in Arroyo Seco near Pasadena (station 11098000). In figure 2, monthly mean discharge in the 1991 water year is compared to the 1961-90 median, maximum, and minimum monthly mean discharge at four representative gaging stations. In addition, a comparison of monthly precipitation for the 1991 water year and the long-term average also is shown in figure 2. The year began with below average or record low flows. Precipitation in March was far above average in most locations. Many streams exceeded the peak discharge bases, none had peaks of record. Annual departure from the 1961-90 mean discharge at four selected gaging stations is shown in figure 3. A comparison of 1991 peak discharge to peaks for period of record at selected stations are shown in table 1.

Table 1. Comparison of peak discharge for 1991 water year with those for period of record for selected stations

Station No.	Station name	Water year 1991		Period of record	
		Peak discharge (ft ³ /s)	Date	Peak discharge (ft ³ /s)	Water year
10255810	Borrego Palm Creek near Borrego Springs	110	Mar. 1	2,640	1979
11055800	City Creek near Highland	460	Mar. 1	7,000	1969
11098000	Arroyo Seco near Pasadena	921	Mar. 1	8,620	1938
11111500	Sespe Creek near Wheeler Springs	3,820	Mar. 1	11,600	1983



Figure 1. Runoff, in percent of median, for the 1991 water year.

WATER RESOURCES DATA -- CALIFORNIA, WATER YEAR 1991

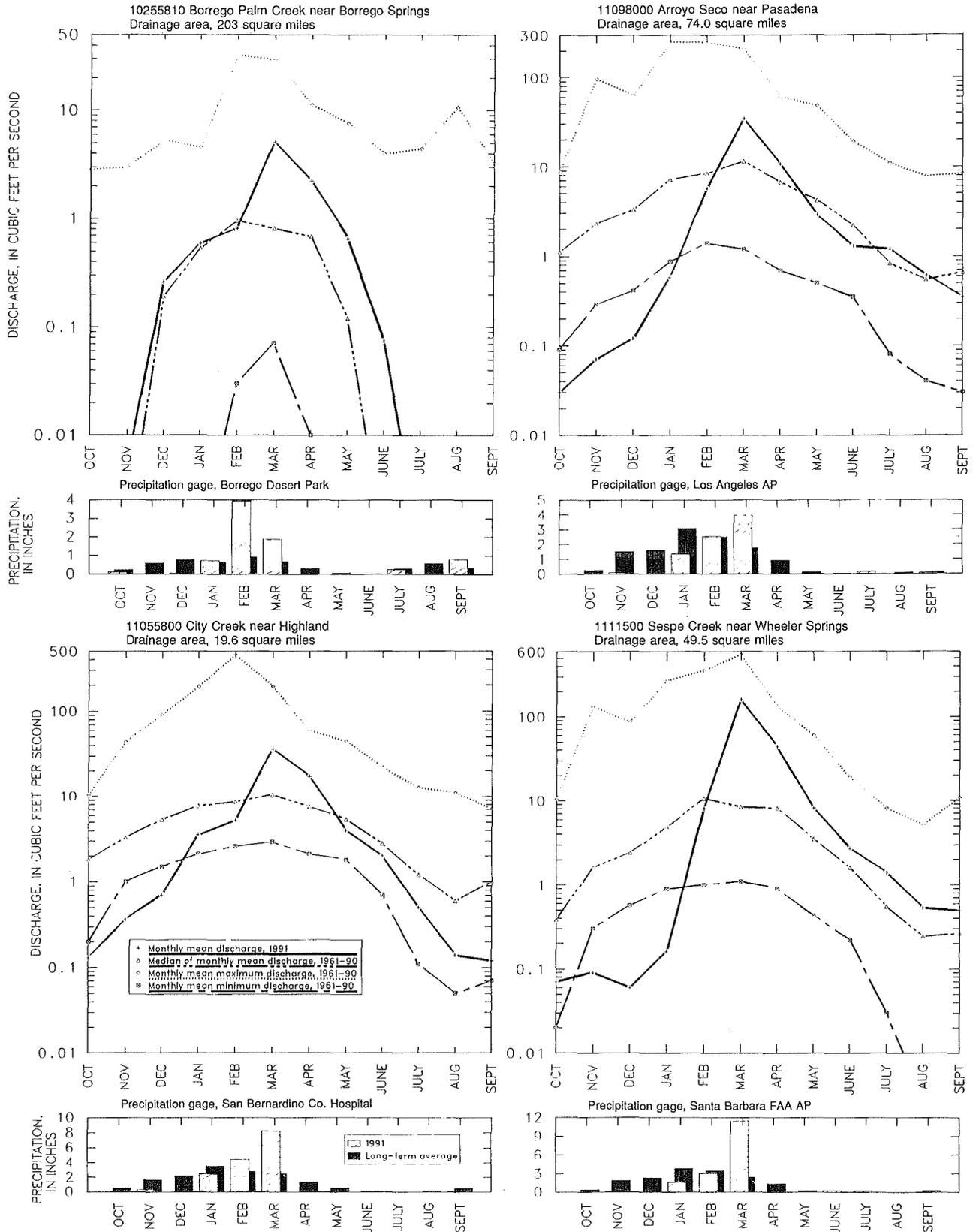


Figure 2. Discharge and precipitation during water year 1991 and long-term statistics at four representative gaging stations. Precipitation data from National Oceanic and Atmospheric Administration, 1991, Climatological data, annual report: v. 95.

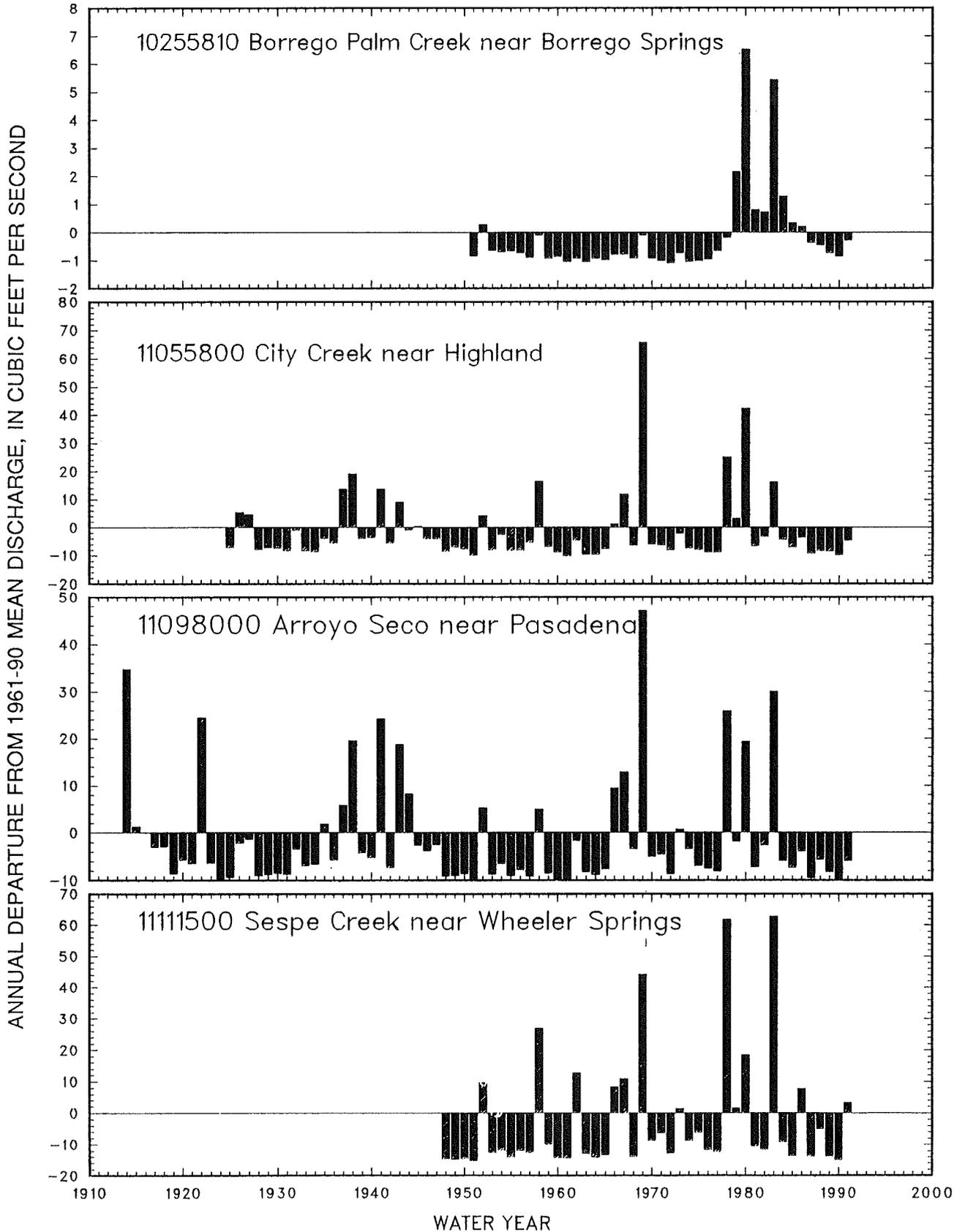


Figure 3. Annual departure from 1961-90 mean discharge for period of record at selected gaging stations.

Water Quality

Water samples collected at four NASQAN stations reported in this volume were analyzed for water-quality constituents during the 1991 water year. Specific conductance varied from 613 microsiemens at Santa Ana River below Prado Dam (station 11074000) to 3,610 microsiemens in the Alamo River at Drop No. 3, near Calipatria (station 10254670). Median dissolved-solids concentrations for samples collected from the NASQAN stations were slightly smaller when compared to the 1990 values. The monthly mean dissolved-solids concentrations during water year 1991 are compared with long-term dissolved-solids concentrations at two selected stations (fig. 4).

The largest densities of fecal-coliform (11,000 colonies per 100 milliliters) and fecal-streptococci (20,000 colonies per 100 milliliters) bacteria were determined from water samples collected from Alamo River at Drop 3, near Calipatria.

Chemical-constituent concentrations in excess of U.S. Environmental Protection Agency (EPA) water-quality criteria were detected in water samples collected from several stations and are listed below.

<u>Station No.</u>	<u>Station name</u>	<u>Water-quality constituent exceeding EPA water-quality criteria</u>
10254670	Alamo River at Drop No. 3, near Calipatria	Sulfate, chloride, total dissolved solids
10256060	Whitewater River at White Water cutoff, at White Water	Sulfate, total dissolved solids
11039600	Bubble-up Creek near Pala	Sulfate, chloride, total dissolved solids, manganese
11042000	San Luis Rey River at Oceanside	Sulfate, chloride, total dissolved solids, manganese
11074000	Santa Ana River below Prado Dam	Nitrate, manganese
11103000	Los Angeles River at Long Beach	pH
331942117035301	West Fork Bubble-Up Creek near Pala	Sulfate, chloride, total dissolved solids, manganese
332026117040001	Bubble-Up Creek below west fork tributary, near Pala	Sulfate, chloride, total dissolved solids, manganese
345727120375401	Green Canyon Creek at Main Street, near Guadalupe	Nitrate

Suspended-sediment discharge and concentrations were monitored periodically at 10 stations in the area included in this volume.

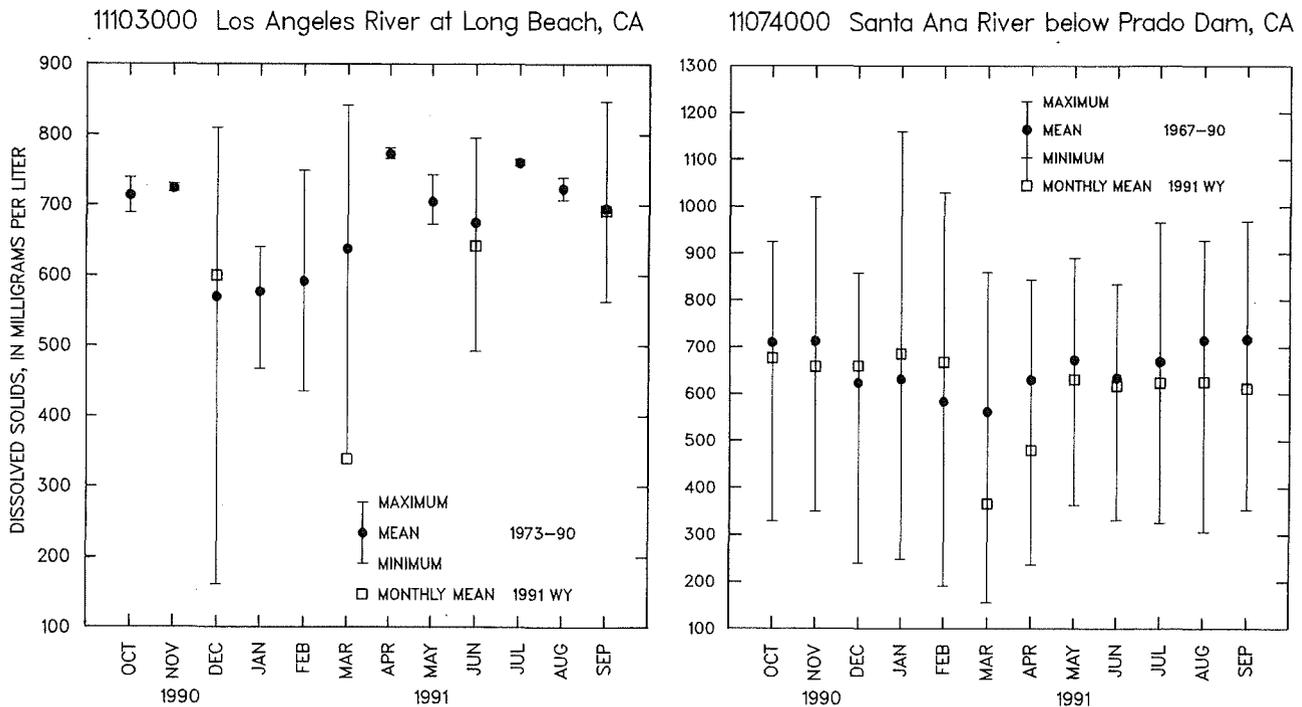


Figure 4. Comparison of monthly mean dissolved-solids concentrations during water year 1991 with long-term mean dissolved-solids concentrations at two selected stations.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped drainage basins nationwide. The data provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting that the data may be used for; (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs; (3) to detect changes or trends with time in the pattern of occurrence of water-quality characteristics; and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1991 water year that began October 1, 1990, and ended September 30, 1991. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and contents data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each streamsite data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for surface-water stations in California where only miscellaneous measurements are made.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports has been in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 11078000, which appears just to the left of the station name, includes the two-digit part number "11" plus the six-digit downstream-order number "078000." The part number designates the major river basin; for example, part "11" is the Pacific Slope Basins in California.

Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude; the next seven digits denote degrees, minutes, and seconds of longitude; and the last two digits (assigned sequentially) identify the other sites within a 1-second grid (fig. 5). This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description.

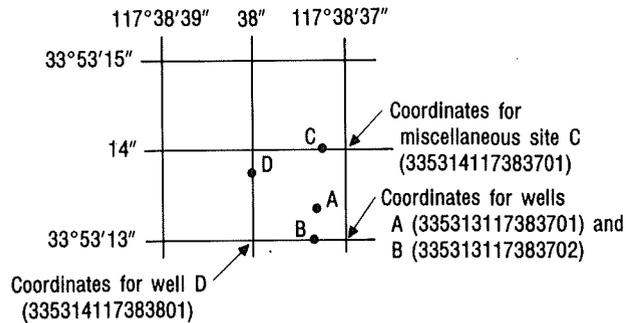


Figure 5. System for numbering miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake and reservoir contents, similarly, are those for which stage or contents may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and crest-stage partial-record stations for which data are given in this report are shown, by county, in figures 6 through 16.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake contents. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in U.S. Geological Survey Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge are prepared for any stage within the range of the measurements. If it is necessary to define extremes of discharge outside the range of current-meter measurements, the curves are extended using (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dam or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes or observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available surveys, curves, or tables defining the relation of stage and contents. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relation changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relation. When this is done, the contents computed may become increasingly in error as time increases since the last survey. Discharges over lake or reservoir spillways are computed from stage-discharge relations, in the same manner as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation.

The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time when the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see Definition of Terms), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations with at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possible, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were revised after the station was discontinued. If the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton storage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly, measured discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing the table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second (ft^3/s) for values less than $1 \text{ ft}^3/\text{s}$, to the nearest tenth between 1.0 and $10 \text{ ft}^3/\text{s}$, to whole numbers between 10 and $1,000 \text{ ft}^3/\text{s}$, and to three significant figures for more than $1,000 \text{ ft}^3/\text{s}$. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the measured discharge.

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of sites as well as an index of records of discharge collected by other agencies but not published by the U.S. Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge measurement notes, gage-height records, temperature measurements, and rating tables are on file in the California District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve various types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 6 through 16.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is the assurance that the data obtained represent the in-situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, are made onsite when samples are taken. To assure that measurements made in the laboratory also represent the in-situ water, carefully prescribed procedures are followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in "Techniques of Water-Resources Investigations," Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapters A1, A3, and A4. All these references are listed on p. 21 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the California District office.

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative value available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values for each constituent measured and are based on hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the District office.

Historical and current (1991) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter (ng/L). If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter ($\mu\text{g/L}$) and could reflect contamination introduced during some phase of the procedure.

Water Temperature

Water temperatures are measured at the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations measured immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Cross-Sectional Data

Cross-sectional surveys of water temperature, pH, specific conductance, dissolved oxygen, and suspended sediment are done at all NASQAN and Hydrologic Bench-mark stations during various seasons and surface-water discharges. Documentation of cross-section variation of water quality is essential in order to determine how many samples in a cross section are necessary to ensure a representative composite sample.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the U.S Geological Survey's National Water-Quality Laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in Techniques of Water-Resources Investigations, Book 5, Chapter C1; methods used by the laboratories are given in Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and other data obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the individual parameters.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature recorder, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

ACCESS TO WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

- * Station Header File - Contains descriptive information on over 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- * Daily Values File - Contains over 220 million daily values of streamflows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.
- * Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.
- * Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface and ground water.
- * Ground-Water Site Inventory Data Base - Contains inventory data for over 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, VA 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5- 1/4 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District offices. (See address on the back of the title page.)

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report are defined below. See the table for converting inch-pound units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by a well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease; others perform an essential role in nature in the recycling of materials, for example, decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35 °C. For the membrane filter method, these bacteria are defined as the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C ± 0.5 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Fecal-coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. For the membrane filter method, they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5 °C ± 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Fecal-streptococcal bacteria are bacteria found in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. For the membrane filter method they are defined as all the organisms which produce red or pink colonies within 48 hours at 35 °C ± 0.5 °C on KF streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Benthic organisms (invertebrates) are the group of animals living in or on the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m³) and periphyton and benthic organisms in grams per square meter (g/m²).

Dry mass refers to the mass of residue present after drying in an oven at 105 °C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cell volume determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell numbers of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements on cell dimensions (that is, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (that is, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3 \pi r^3 \quad \text{cone } 1/3 \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

From cell volume, total algal biomass expressed as biovolume ($\pi\text{m}^3/\text{mL}$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes over all species.

Cells per volume (cells/volume) refers to the number of cells of any organism that are counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually in milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second-day (cfs.d) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons or 2,445 cubic meters.

Discharge is the volume of water (or more broadly, total fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate. It is recognized that certain kinds of samples cannot be filtered; to provide for this, procedures that are considered equivalent to filtering through a 0.45-micrometer membrane filter will be identified and announced at a later date.

Dissolved-solids concentration of water is determined either analytically or by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = \sum_{i=1}^s \frac{n_i}{n} \log^2 \frac{n_i}{n},$$

where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the samples are the same; to some positive number, when some or all the organisms in the sample are different.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the Earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water, together with all tributary surface streams and bodies of impounded surface water.

Gage datum is the elevation of the zero point of the reference gage from which gage height is determined as compared to the National Geodetic Vertical Datum of 1929. This elevation is established by a system of levels from known bench marks or by approximation from topographic maps.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap that is required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation

$$I = I_0 e^{-\lambda L},$$

where I_0 is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}.$$

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that are usually arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This development process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-pupa-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (UG/G, $\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called Sea Level Datum of 1929 or mean sea level in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 408 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting that the data may be used for, (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) to detect changes in trends with time in the pattern occurrence of water-quality characteristics, and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

Nekton are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area of the habitat, usually square meter (m²), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter code is a five-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024-0.004	Sedimentation
Silt.....	0.004-0.062	Sedimentation
Sand.....	0.062-2.0	Sedimentation or sieve
Gravel.....	2.0-64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Percent composition or percent of total is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Periphyton is the assemblage of micro-organisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, the periphyton also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants, respectively, are the two categories reported.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton are suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton compose the plant part of the plankton. They are usually microscopic, and their movement is subject to water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials into the surrounding water, the phytoplankton have a profound effect on the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are phytoplankton organisms having a blue pigment in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms, chiefly green plants. The rate of primary production is estimated by measuring the amount of carbon assimilated by plants (carbon method) or the amount of oxygen released (oxygen method).

Milligrams of carbon per area or volume per unit time [$\text{mg C}/(\text{m}^2/\text{time})$ for periphyton and macrophytes and $\text{mg C}/(\text{m}^3/\text{time})$ for phytoplankton] are the units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [$\text{mg O}_2/(\text{m}^2/\text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3/\text{time})$ for phytoplankton] are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical Program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment; thus, the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bedload is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bedload is considered to consist of particles in transit within 0.25 ft (0.076 m) of the streambed.

Bedload discharge (tons per day) is the quantity of sediment, as measured by dry weight, that moves past a section as bedload in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour period.

Suspended-sediment discharge (tons per day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day by multiplying discharge times milligrams per liter times 0.0027.

Suspended-sediment load (tons per day) is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total-sediment discharge or total-sediment load (tons per day) is the sum of suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry mass, that passes a section in a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating dissolved-solids concentration in water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic-organism collection and plexiglass strips for periphyton collection.

Surface area of a lake is the area, in square miles or acres, outlined on the latest U.S. Geological Survey topographic map as the boundary of the lake and measured by a planimeter. In localities not covered by topographic maps, the areas are computed from the best maps available. Areas shown are for the lake stage at the time the map was made.

Surficial bed material is the part (upper 0.1 to 0.2 ft or 0.03 to 0.06 m) of the bed material that is sampled by using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment; thus, the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom.....Animal
Phylum.....Arthropoda
Class.....Insecta
Order.....Ephemeroptera
Family.....Ephemeridae
Genus.....Hexagenia
Species.....Hexagenia limbata

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or a digital mechanism that records water temperature in a digital format on punched paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total load (tons) is the total amount of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the milligrams per liter of the constituent, times the factor 0.0027, times the number of days.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment; thus, the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in the dissolved and suspended phases of the sample. A knowledge of the expected form is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all the constituent in the sample.)

Turbidity of a sample is the reduction of transparency due to the presence of particulate matter. In this report it is expressed in Nephelometric turbidity units (NTU), obtained from the Nephelometric method for turbidity determination which measures the intensity of light scattered by suspended particles at 90° from the path of incident light source.

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1991, is called the "1991 water year."

WDR is used as an abbreviation for "Water-Data Reports" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Building 810, Denver, CO 80225. Prepayment is required. Remittance should be sent by check or money order payable to U.S. Geological Survey, Department of the Interior. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. Water temperature--influential factors, field measurement, and data presentation, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W.W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. Application of surface geophysics to ground-water investigations, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. Application of seismic-refraction techniques to hydrologic studies, by F.P. Haeni: USGS--TWRI Book 2, Chapter D2 1988. 86 pages.
- 2-E1. Application of borehole geophysics to water-resources investigations, by W.S. Keys, and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. Borehole geophysics applied to ground-water investigations, by W. Scott Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
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- 3-A2. Measurement of peak discharge by slope-area method, by Tate Dalrymple and M.A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. Measurement of peak discharge at culverts by indirect methods, by G.L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. Measurement of peak discharge at width contractions by indirect methods, by H.F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. General procedure for gaging streams, by R.W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. Stage measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. Discharge measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
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- 3-A13. Computation of continuous records of streamflow, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. Use of flumes in measuring discharge, by F.A. Kilpatrick and V.R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. Computation of water-surface profiles in open channels, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. Measurement of discharge using tracers, by F.A. Kilpatrick and E.D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. Acoustic velocity meter systems, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
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- 3-A19. Levels of streamflow gaging stations, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.
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- 3-B2. Introduction to ground-water hydraulics, a programmed text for self-instruction, by G.D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
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- 3-B4. Regression modeling of ground-water flow, by Richard L. Cooley and Richard L. Naff: USGS--TWRI: Book 3, Chapter B4. 1990. 232 pages.
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- 3-C1. Fluvial sediment concepts, by H.P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
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- 5-A5. Methods for determination of radioactive substances in water and fluvial sediments, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
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- 7-C1. Finite difference model for aquifer simulation in two dimensions with results of numerical experiments, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. Computer model of two-dimensional solute transport and dispersion in ground water, by L.F. Konikow and J.D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. A model for simulation of flow in singular and interconnected channels by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. Methods of measuring water levels in deep wells, by M.S. Garber and F.C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. Installation and service manual for U.S. Geological Survey manometers, by J.D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. Calibration and maintenance of vertical-axis type current meters, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

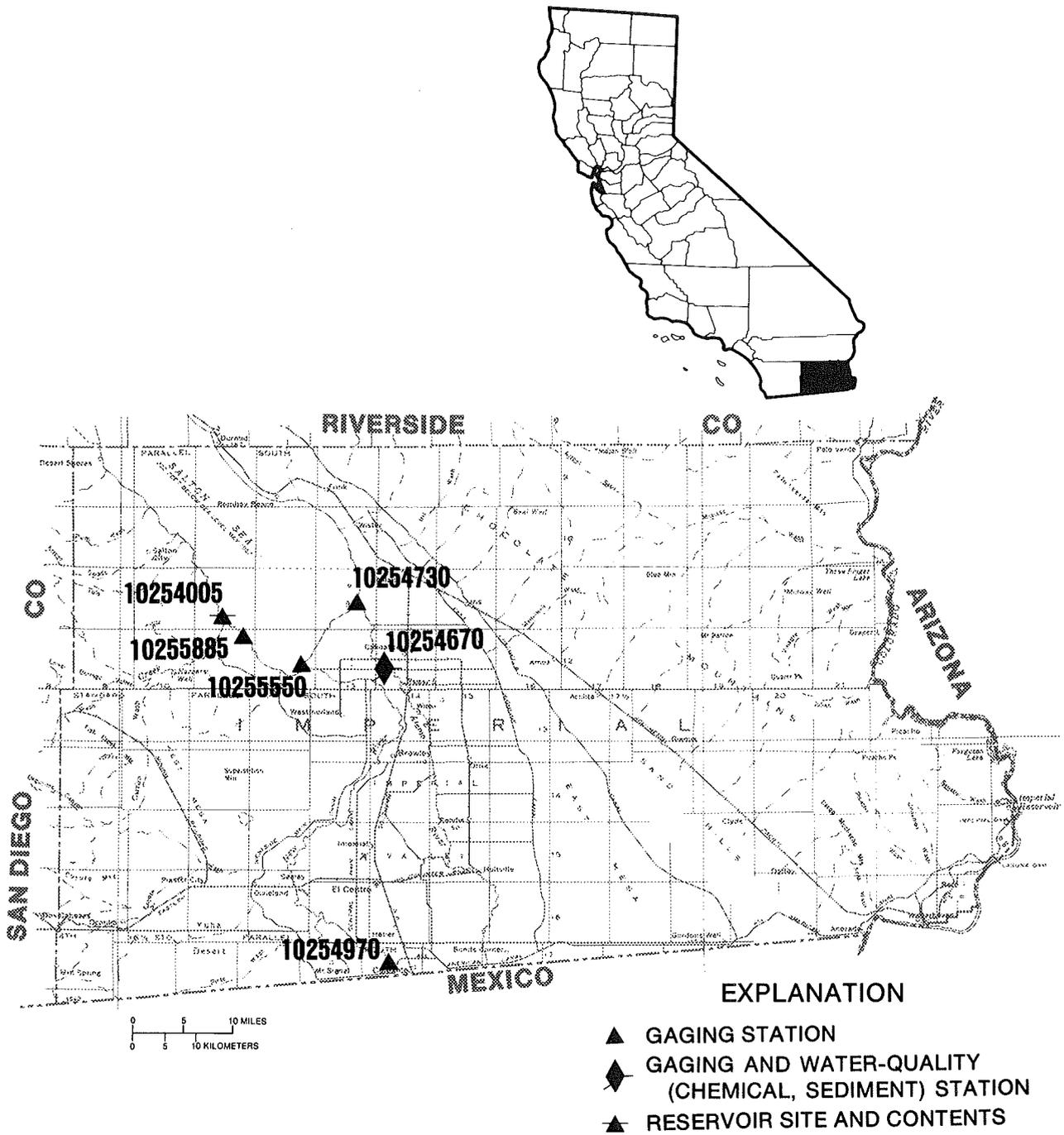


Figure 6. Location of discharge and water-quality stations in Imperial County.

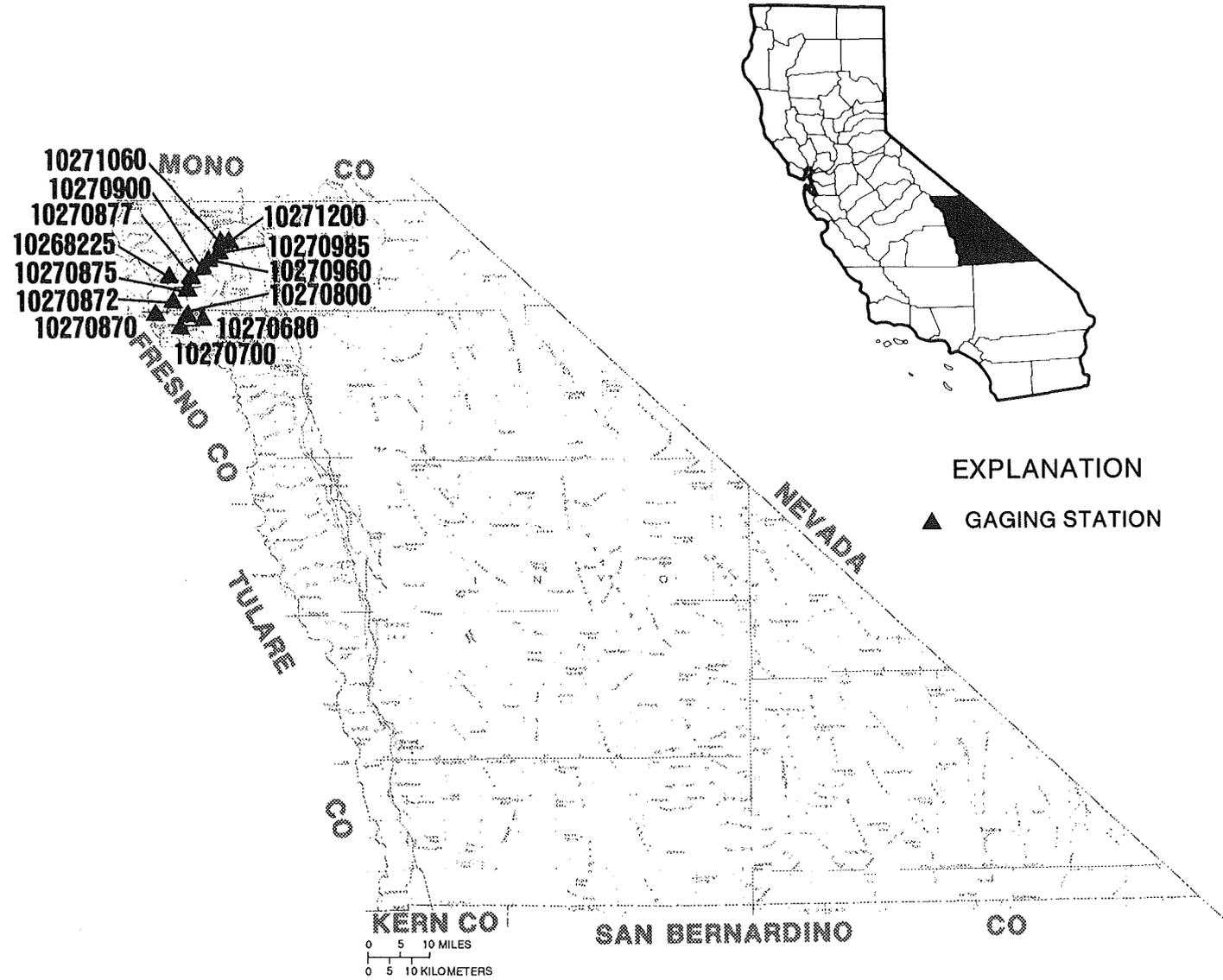


Figure 7. Location of discharge stations in Inyo County.

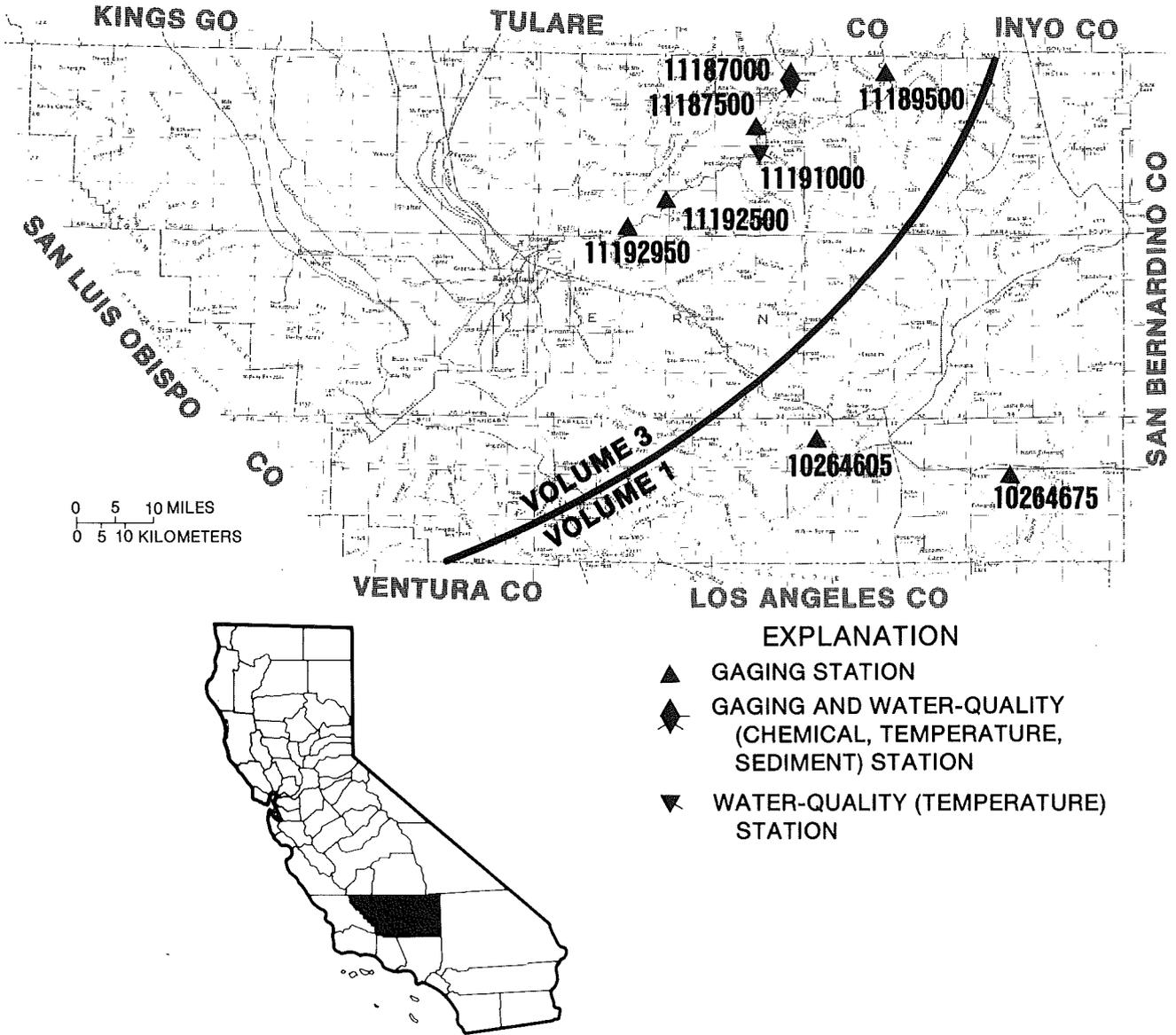


Figure 8. Location of discharge and water-quality stations in Kern County.
 (NOTE: Records for stations 11187000 through 11192950 published in volume 3.)

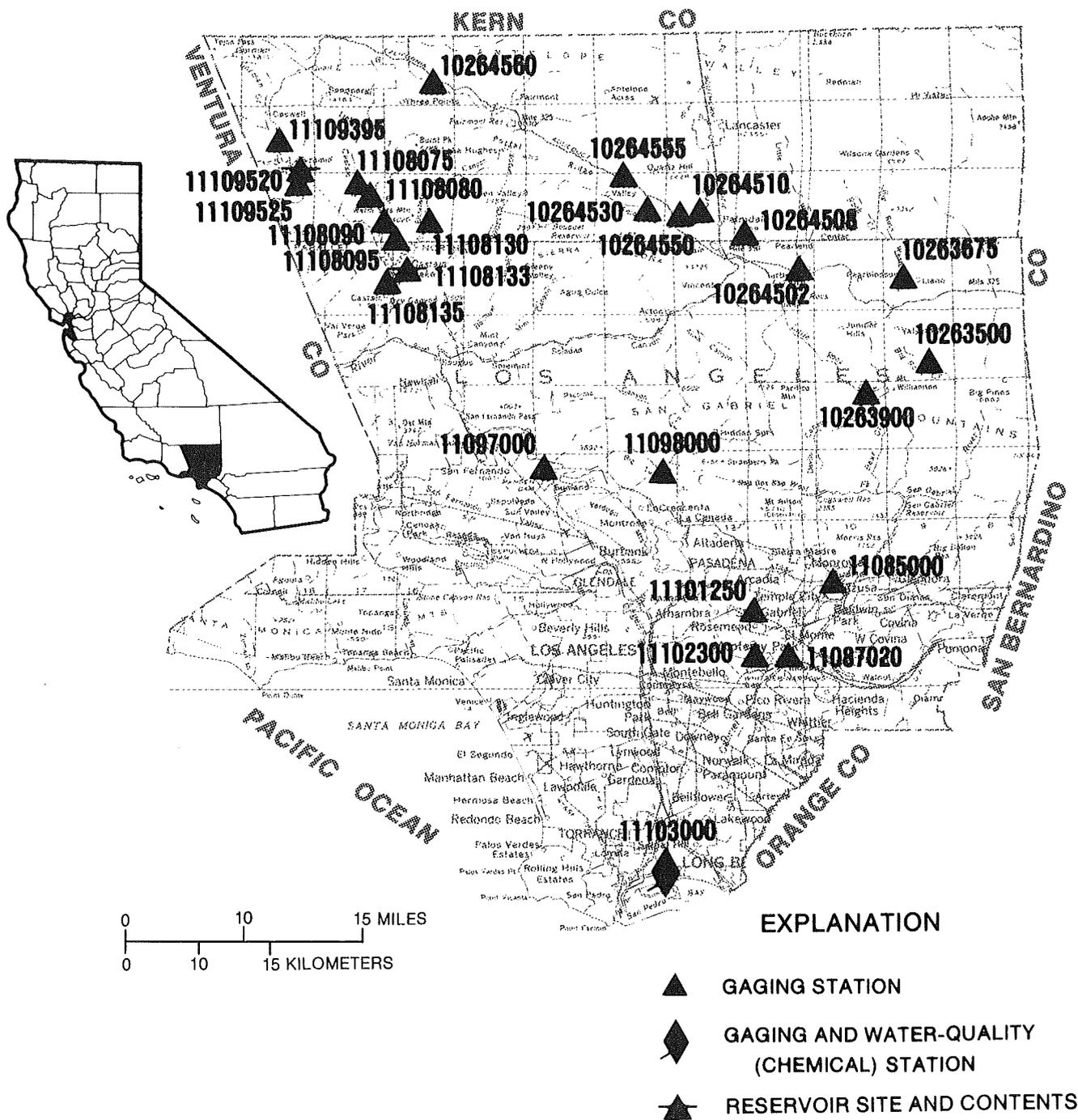


Figure 9. Location of discharge and water-quality stations in Los Angeles County.

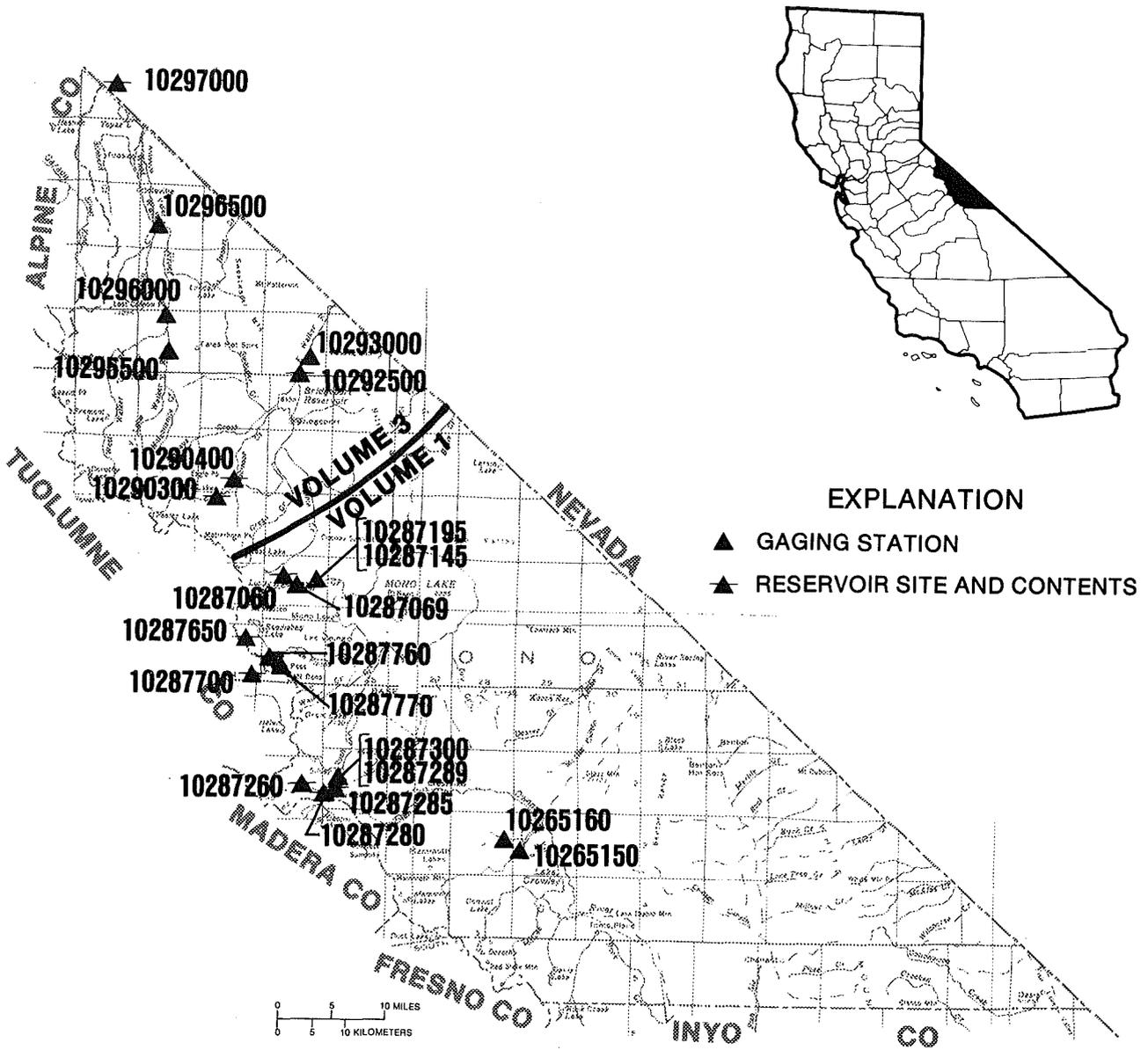


Figure 10. Location of discharge stations in Mono County.
 (NOTE: Records for stations 10290300 through 10297000
 published in volume 3.)

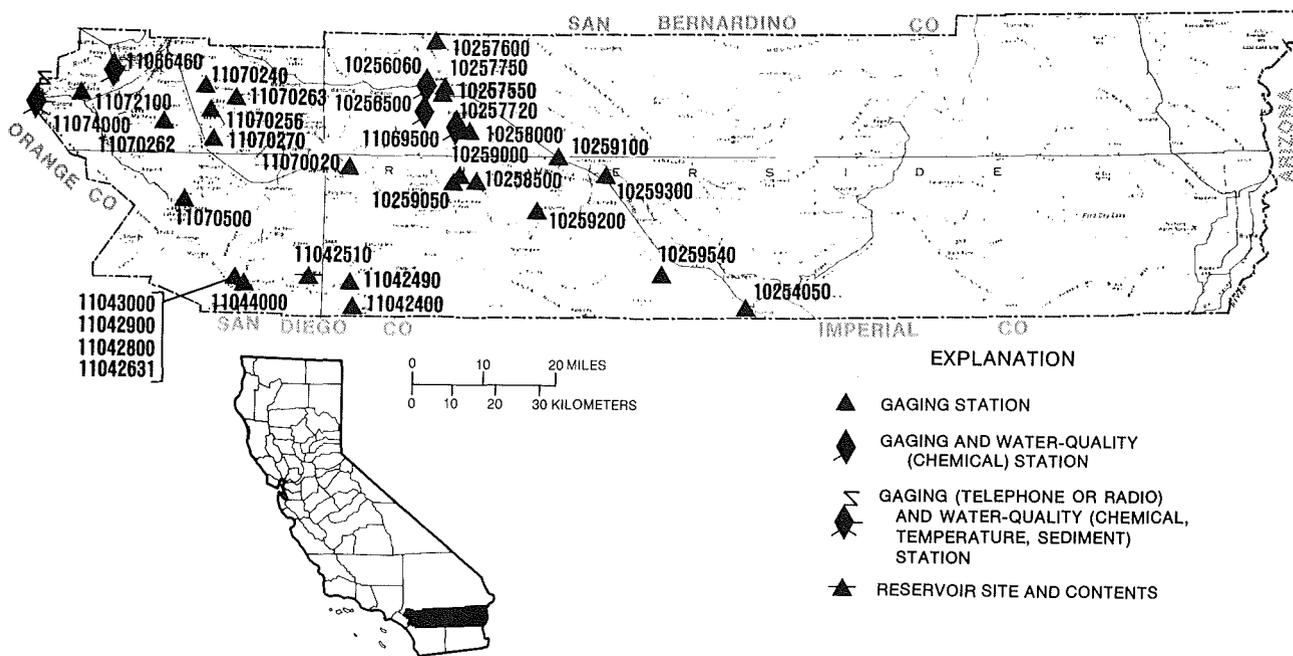


Figure 12. Location of discharge and water-quality stations in Riverside County.

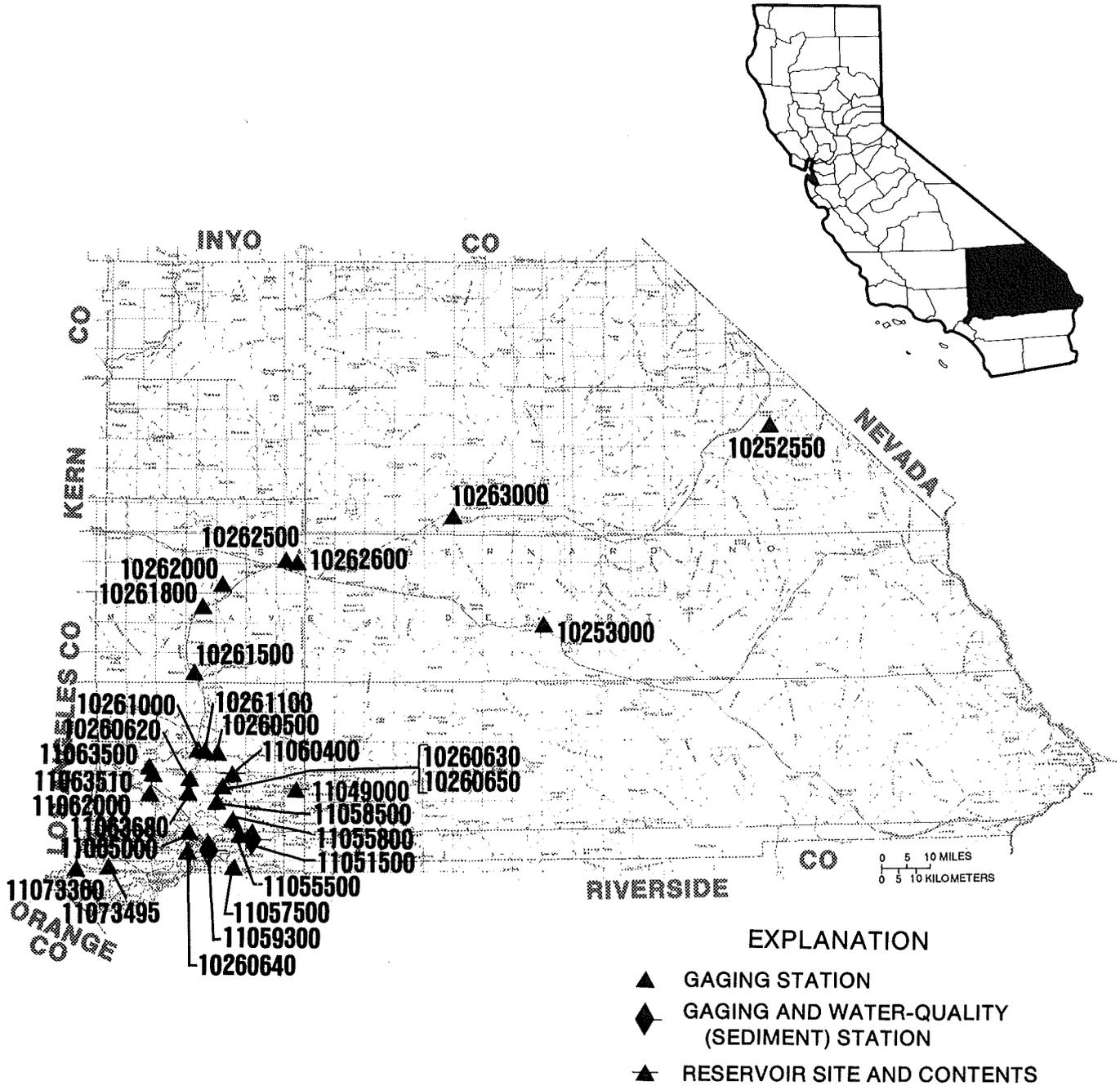


Figure 13. Location of discharge and water-quality stations in San Bernardino County.

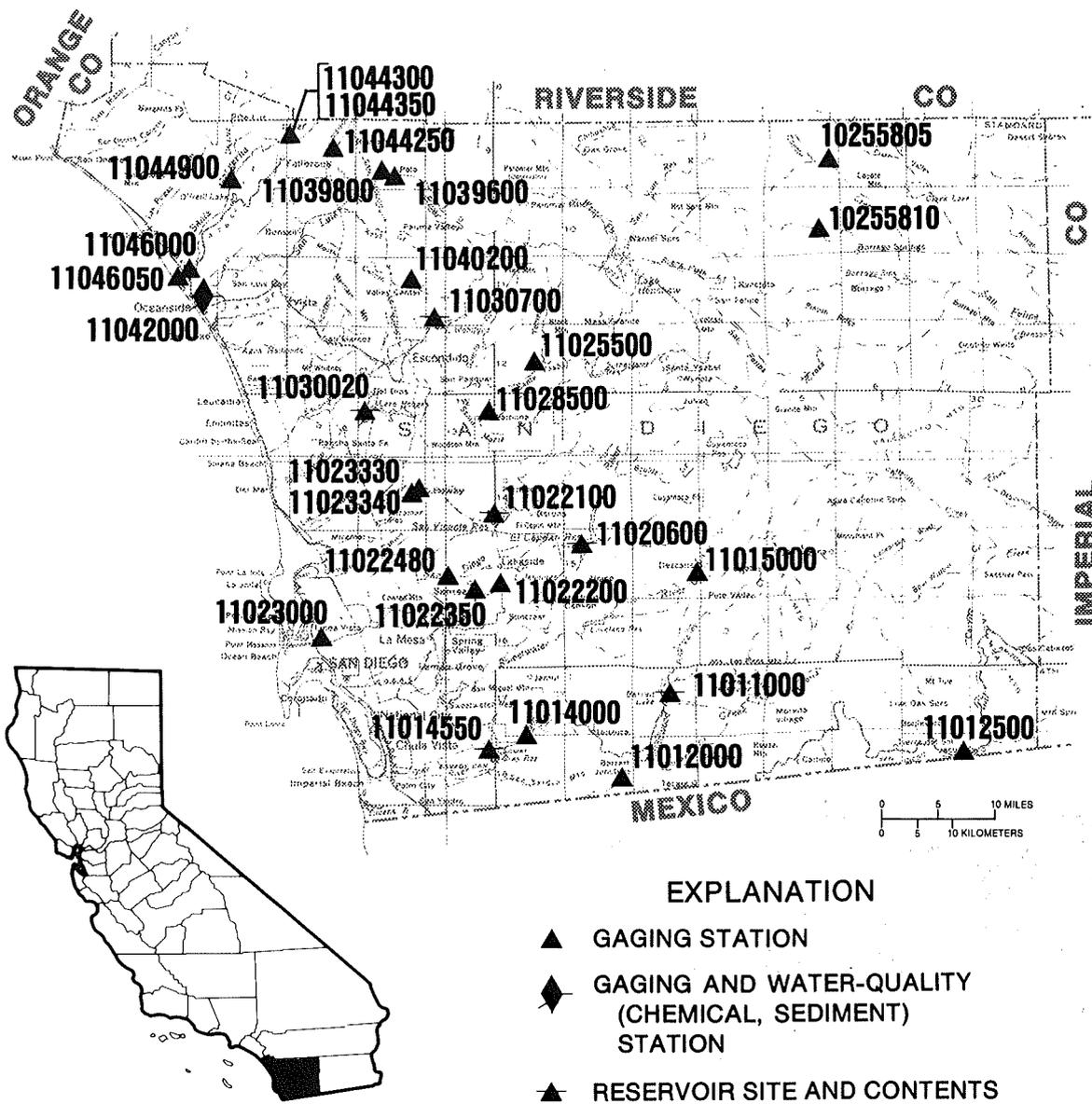


Figure 14. Location of discharge and water-quality stations in San Diego County.

EXPLANATION

- ▲ GAGING STATION
- ◆ GAGING AND WATER-QUALITY (CHEMICAL) STATION
- ▲ RESERVOIR SITE AND CONTENTS

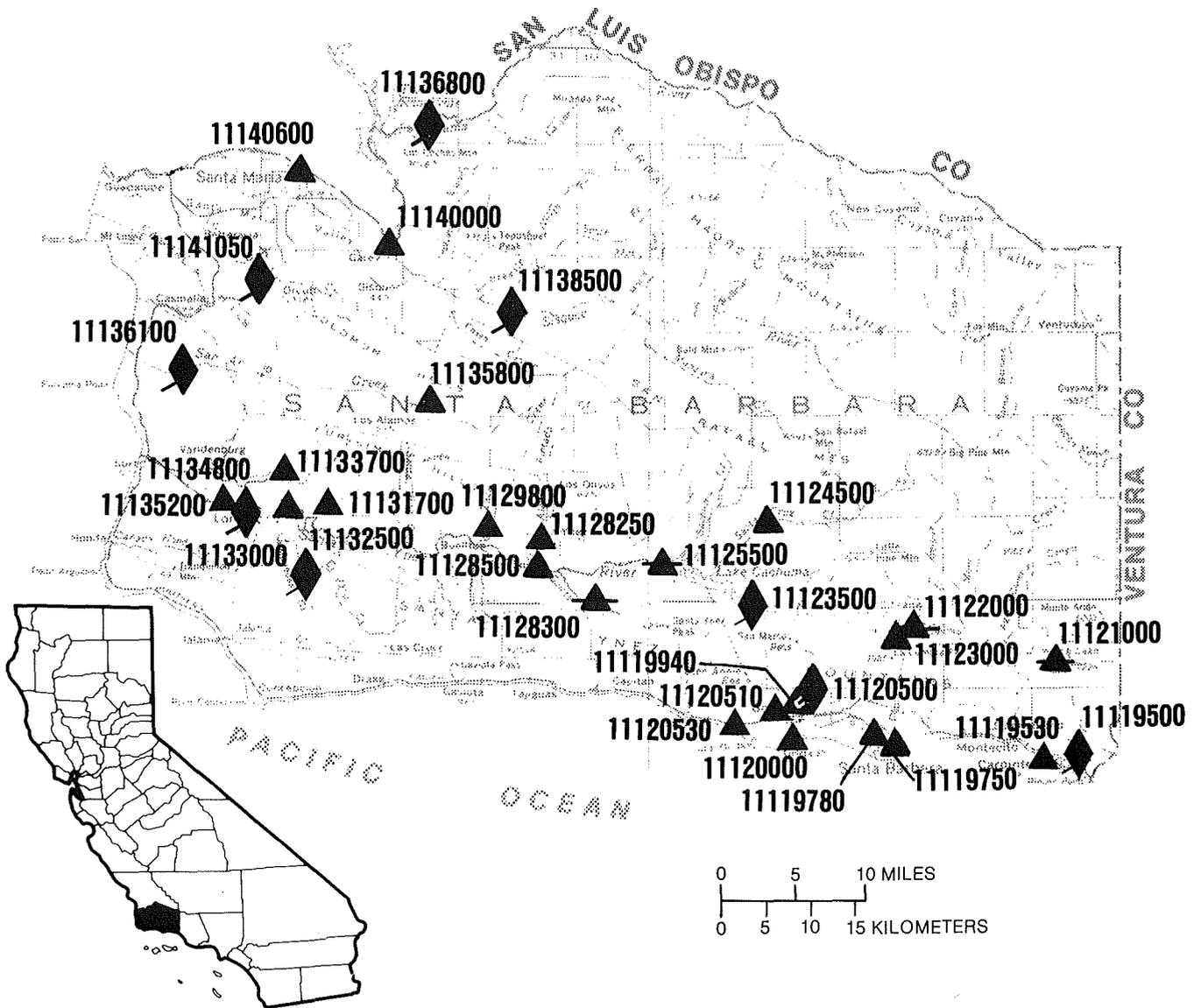


Figure 15. Location of discharge and water-quality stations in Santa Barbara County.

EXPLANATION

- ▲ GAGING STATION
- ◆ GAGING AND WATER-QUALITY (SEDIMENT) STATION
- ▲ RESERVOIR SITE AND CONTENTS

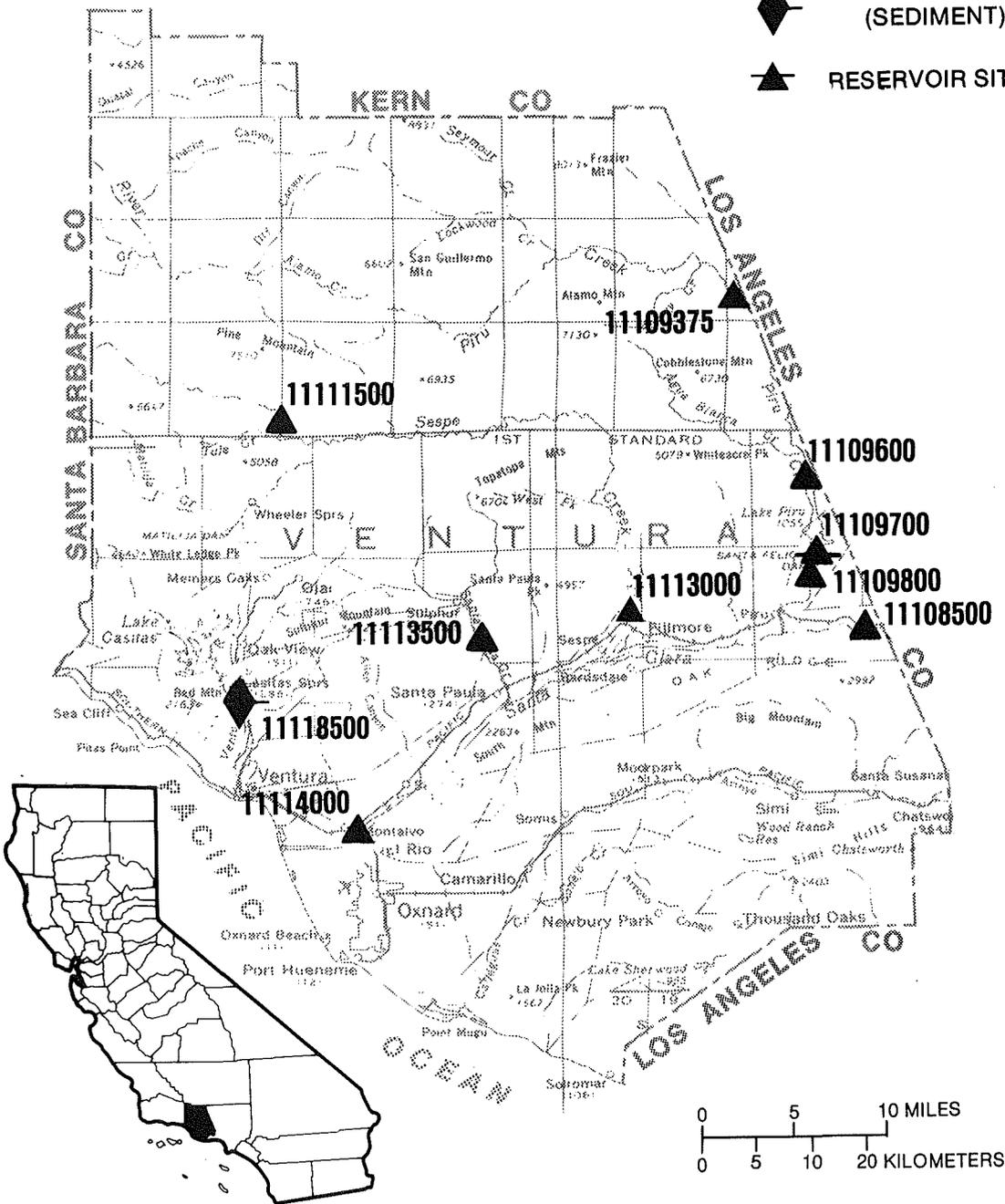


Figure 16. Location of discharge and water-quality stations in Ventura County.

GAGING STATION AND WATER-QUALITY RECORDS

Remark Codes

The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
>	Actual value is greater than value shown
<	Actual value is less than value shown
K	Results based on colony count outside the acceptable range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant
*	Instantaneous streamflow at the time of cross-sectional measurements
1	Laboratory value

BRISTOL LAKE BASIN

10252550 CARUTHERS CREEK NEAR IVANPAH, CA

LOCATION.--Lat 35°14'33", long 115°17'58", in NW 1/4 NE 1/4 sec.6, T.13 N., R.16 E., San Bernardino County, Hydrologic Unit 15030102, on left bank 6.6 mi south of Ivanpah.

DRAINAGE AREA.--1.13 mi².

PERIOD OF RECORD.--October 1963 to September 1981, May 1982 to current year.

REVISED RECORDS.--WDR CA-82-1: 1979(M).

GAGE.--Water-stage recorder. Elevation of gage is 5,640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--27 years (water years 1964-81, 1983-91), 0.11 ft³/s, 82 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 814 ft³/s, Aug. 12, 1979, gage height, 5.75 ft, from rating curve extended above 2.5 ft³/s on basis of slope-conveyance studies; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10 ft³/s and maximum (*), from rating curve extended above 2.5 ft³/s on basis of slope-conveyance studies:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	Unknown	*20	*1.79				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e5.0	1.1	.00	e.00	.00	.00	.00
2	.00	.00	.00	.00	.00	e3.0	.95	.00	e.00	.00	.00	.00
3	.00	e.00	.00	.08	.00	e2.8	.95	.00	e.00	.00	.00	.00
4	.00	e.00	.00	.86	.00	e2.5	.83	.00	e.00	.00	.00	.00
5	.00	e.00	.00	.54	.00	e2.0	.72	.00	e.00	.00	.00	.44
6	.00	e.00	.00	.34	.00	e2.0	.62	.00	e.00	.00	.00	.00
7	.00	e.00	.00	.14	.00	e1.5	.57	.00	.00	.00	.00	.00
8	.00	e.00	.00	.11	.00	e1.5	.52	.00	.00	.00	.00	.00
9	.00	e.00	.00	.11	.00	e2.0	.48	.00	.00	.00	.00	.00
10	.00	e.00	.00	.11	.00	e2.0	.48	.00	.00	.00	.00	.00
11	.00	e.00	.00	.00	.00	e2.5	.48	.00	.00	.00	.74	.00
12	.00	e.00	.00	.00	.00	e2.8	.44	.00	.00	.00	.57	.00
13	.00	e.00	.00	.00	.00	e3.0	.44	.00	.00	.00	.00	.00
14	.00	e.00	.00	.00	.00	e2.5	.44	.00	.00	.00	.00	.00
15	.00	e.00	.00	.00	.00	e2.5	.44	.00	.00	.00	.00	.00
16	.00	e.00	.00	.00	.00	e2.0	.34	.00	.00	.00	.00	.00
17	.00	e.00	.00	.00	.00	e2.0	.34	.00	.00	.00	.00	.00
18	.00	e.00	.00	.00	.00	e2.0	.34	.00	.00	.00	.00	.00
19	.00	e.00	.00	.00	.00	e2.0	.11	.00	.00	.00	.00	.00
20	.00	e.00	.00	.00	.00	e2.0	.00	.00	.00	.00	.00	.00
21	.00	e.00	.00	.00	.00	e2.5	.00	.00	.00	.00	.00	.00
22	.00	e.00	.00	.00	.00	e2.8	.00	.00	.00	.00	.00	.00
23	.00	e.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00
24	.00	e.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.00
25	.00	e.00	.00	.00	.00	.72	.00	.00	.00	.00	.00	.00
26	.00	e.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	e.43	1.1	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	e1.3	1.7	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	2.0	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1.2	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	1.2	---	e.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	2.29	1.73	65.12	10.59	0.00	0.00	0.00	1.31	0.44
MEAN	.000	.000	.000	.074	.062	2.10	.35	.000	.000	.000	.042	.015
MAX	.00	.00	.00	.86	1.3	5.0	1.1	.00	.00	.00	.74	.44
MIN	.00	.00	.00	.00	.00	.72	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	4.5	3.4	129	21	.00	.00	.00	2.6	.9

CAL YR 1990 TOTAL 11.96 MEAN .033 MAX 3.2 MIN .00 AC-FT 24
WTR YR 1991 TOTAL 81.48 MEAN .22 MAX 5.0 MIN .00 AC-FT 162

e Estimated.

FLOW FROM MEXICO AT INTERNATIONAL BOUNDARY

The following table lists the monthly and annual flows, in acre-feet, of the Alamo River and New River (station 10254970) at the United States-Mexico international boundary. Data for Alamo River provided by Imperial Irrigation District.

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Alamo River	166	177	193	194	189	197	179	168	160	171	168	123
New River	10570	9790	11990	13630	9960	11840	11290	11440	10370	10960	11290	11530
CAL YR 1990:	Alamo River		1,990 acre-ft			WTR YR 1991:		2,080 acre-ft				
CAL YR 1990:	New River		136,200 acre-ft			WTR YR 1991:		134,700 acre-ft				

SALTON SEA BASIN

10254050 SALT CREEK NEAR MECCA, CA

LOCATION.--Lat 33°26'49", long 115°50'33", in SE 1/4 SW 1/4 sec.28, T.8 S., R.11 E., Riverside County, Hydrologic Unit 18100200, on pier of Southern Pacific railroad bridge, 0.3 mi upstream from mouth, and 16 mi southeast of Mecca.

DRAINAGE AREA.--269 mi².

PERIOD OF RECORD.--January 1961 to current year (since October 1990, low-flow records only).

GAGE.--Water-stage recorder. Elevation of gage is 230 ft below National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 21, 1984, at same site, at datum 2.50 ft lower.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station. No discharge records computed above 20 ft³/s.

AVERAGE DISCHARGE.--29 years (water years 1962-90), 6.92 ft³/s, 5,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (January 1961 to September 1990), 9,900 ft³/s, Sept. 24, 1976, gage height, 16.8 ft, present datum, from floodmarks, from rating curve extended above 20 ft³/s on basis of contracted-opening measurement of peak flow; maximum gage height, 19.4 ft, present datum, Mar. 2, 1983 (backwater from Salton Sea and channel vegetation); minimum daily discharge, 0.06 ft³/s, Nov. 1, 4, 5, 9, 1979.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	2.7	3.8	4.4	4.8	---	4.2	2.2	1.3	.93	---	.88
2	3.2	2.6	3.7	4.7	4.9	---	4.1	2.1	1.3	.88	.85	.88
3	3.0	2.6	3.6	4.9	4.9	8.3	3.9	2.1	1.3	.88	.81	.93
4	2.6	2.5	3.7	6.3	4.8	5.7	3.9	2.2	1.3	.89	.78	1.1
5	2.4	2.6	3.8	7.8	4.8	5.3	3.6	2.2	1.3	.90	.74	---
6	2.3	2.9	3.9	5.8	4.9	5.0	3.5	2.1	1.2	.88	.73	---
7	2.2	3.1	4.0	5.2	4.9	4.4	3.4	2.0	1.2	.89	.75	2.5
8	2.2	2.9	3.9	5.0	4.7	4.2	3.4	2.0	1.3	.89	.75	2.0
9	2.1	3.0	4.1	5.0	4.5	4.1	3.2	1.9	1.5	.84	.75	1.9
10	2.0	3.4	4.2	5.3	4.6	4.2	2.9	1.9	1.2	.78	.75	1.7
11	2.1	3.5	4.2	5.6	4.7	4.3	2.8	1.8	1.1	.76	.85	1.5
12	2.2	3.4	4.4	4.9	4.7	4.2	2.7	1.8	1.1	.81	.90	1.4
13	2.2	3.4	4.4	4.8	4.7	4.0	2.6	1.8	1.1	.80	.90	1.4
14	2.2	3.5	4.3	4.8	4.7	4.3	2.8	1.7	1.1	.73	.85	1.3
15	2.4	3.4	4.4	4.9	4.7	4.3	3.0	1.7	1.1	.66	.72	1.4
16	2.5	3.5	4.3	4.9	4.8	4.1	3.1	1.6	1.1	.60	.67	1.4
17	2.6	3.7	4.3	4.9	4.8	3.9	3.0	1.6	1.0	.58	.75	1.4
18	2.6	3.7	4.2	4.5	4.6	4.0	2.9	1.5	1.0	.58	.79	1.4
19	2.7	3.7	4.2	4.4	4.3	4.5	2.9	1.5	.99	.57	.79	1.4
20	2.6	3.9	4.5	4.7	4.1	7.4	2.9	1.5	.96	.59	.79	1.5
21	2.4	4.0	4.4	4.9	4.2	6.5	2.8	1.5	.96	.63	.79	1.5
22	2.3	4.1	4.2	5.0	4.5	5.6	2.7	1.5	.97	.65	.79	1.6
23	2.6	4.1	4.6	4.8	4.5	4.6	2.6	1.5	.97	.66	.81	1.6
24	2.6	4.0	4.3	4.8	4.6	4.4	2.6	1.5	.99	.66	.81	1.6
25	2.8	4.0	4.5	4.8	4.5	4.4	2.6	1.5	1.0	.64	.78	1.5
26	3.0	4.0	4.6	4.8	4.4	7.0	2.5	1.4	1.0	.62	.75	1.9
27	3.1	4.0	4.7	4.9	4.8	---	2.4	1.4	1.0	.59	.75	1.8
28	3.0	3.6	4.8	4.9	---	7.3	2.3	1.3	1.0	.55	.75	1.8
29	2.8	3.7	4.9	4.8	---	5.6	2.1	1.3	1.0	.54	.78	1.7
30	2.6	3.7	4.6	4.9	---	4.8	2.1	1.3	.98	.54	.81	1.7
31	2.6	---	4.4	4.6	---	4.5	---	1.3	---	---	.86	---
TOTAL	82.0	103.2	131.9	156.0	---	---	89.5	52.7	33.32	---	---	---
MEAN	2.65	3.44	4.25	5.03	---	---	2.98	1.70	1.11	---	---	---
MAX	6.1	4.1	4.9	7.8	---	---	4.2	2.2	1.5	---	---	---
MIN	2.0	2.5	3.6	4.4	---	---	2.1	1.3	.96	---	---	---
AC-FT	163	205	262	309	---	---	178	105	66	---	---	---

CAL YR 1990 TOTAL 1086.48 MEAN 2.98 MAX 105 MIN .51 AC-FT 2160

10254670 ALAMO RIVER AT DROP NO. 3, NEAR CALIPATRIA, CA
(National stream-quality accounting network station)

LOCATION.--Lat 33°06'16", long 115°32'39", on line between secs.19 and 20, T.12 S., R.14 E., Imperial County, Hydrologic Unit 18100200, on right bank 2.2 mi southwest (revised) of Calipatria.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year. Records prior to October 1979 in files of the Imperial Irrigation District.

GAGE.--Water-stage recorder and broad-crested weir. Elevation of gage is 185 ft below National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records excellent. Flow is mainly return from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,940 ft³/s, Mar. 3, 1983, gage height, 5.95 ft, from rating curve extended above 1,000 ft³/s; maximum gage height, 7.06 ft, Oct. 10, 1986 (backwater from debris); minimum daily, 259 ft³/s, Jan. 2, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,360 ft³/s, Feb. 28, gage height, 2.73 ft; minimum daily, 325 ft³/s, Jan. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	968	794	798	643	728	975	594	1050	815	657	931	741
2	1180	765	813	541	761	601	634	995	915	709	799	715
3	1000	846	723	588	812	427	746	1030	915	716	755	718
4	922	860	738	851	742	382	864	1030	804	739	713	741
5	935	907	782	664	687	388	916	1110	800	767	639	766
6	859	923	738	508	738	366	1010	984	818	742	634	890
7	830	931	708	365	752	398	1050	975	837	757	632	841
8	777	923	723	381	742	437	1050	1030	859	745	667	736
9	745	891	745	426	754	523	1020	1070	847	772	705	637
10	770	851	674	434	684	594	1070	1020	833	741	727	627
11	858	851	680	382	611	729	1020	1010	812	761	746	628
12	937	844	713	348	670	814	1010	1030	849	717	761	625
13	939	867	712	329	753	871	1050	1060	783	731	790	673
14	937	883	645	325	723	927	1040	974	780	723	714	720
15	919	875	625	345	691	891	1030	940	822	734	701	688
16	947	851	611	339	684	893	1010	919	838	739	671	681
17	984	867	629	397	644	919	982	965	783	724	674	741
18	913	883	608	438	595	877	1020	953	772	706	714	769
19	870	844	608	473	522	793	1070	1030	798	714	729	850
20	792	782	636	513	576	777	989	999	782	769	752	853
21	795	738	622	489	615	842	888	1020	763	766	734	777
22	868	708	622	492	670	838	876	1020	718	787	759	728
23	871	657	657	538	743	846	945	1000	741	749	701	703
24	923	700	636	568	753	845	963	955	727	755	706	716
25	905	723	483	625	791	774	945	947	745	743	706	732
26	869	636	389	639	788	796	974	855	787	752	722	718
27	869	685	508	607	768	814	1010	738	744	739	733	800
28	856	715	636	596	1100	824	1040	847	738	773	688	774
29	838	723	700	648	---	712	1000	819	708	767	668	805
30	802	745	730	716	---	649	1070	816	685	765	690	848
31	822	---	745	763	---	619	---	800	---	770	697	---
TOTAL	27500	24268	20637	15971	20097	22141	28886	29991	23818	23029	22258	22241
MEAN	887	809	666	515	718	714	963	967	794	743	718	741
MAX	1180	931	813	851	1100	975	1070	1110	915	787	931	890
MIN	745	636	389	325	522	366	594	738	685	657	632	625
AC-FT	54550	48140	40930	31680	39860	43920	57300	59490	47240	45680	44150	44120
CAL YR 1990	TOTAL 276152	MEAN 757	MAX 1180	MIN 389	AC-FT 547700							
WTR YR 1991	TOTAL 280837	MEAN 769	MAX 1180	MIN 325	AC-FT 557000							

10254670 ALAMO RIVER AT DROP NO. 3, NEAR CALIPATRIA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-70, 1975-1977, 1979 to current year.

CHEMICAL DATA: Water years 1969-70, 1975-77, 1979 to current year.

BIOLOGICAL DATA: Water years 1979-81.

SPECIFIC CONDUCTANCE: Water years 1969-70, 1975-77, 1979-84.

WATER TEMPERATURE: Water years 1969-70, 1975-77, 1979-84.

SEDIMENT DATA: Water years 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1981 to September 1984.

WATER TEMPERATURE: March 1981 to September 1984.

INSTRUMENTATION.--Water-quality monitor from March 1981 to September 1984.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CaCO3)
DEC												
11...	0900	657	3610	8.0	12.5	85	770	10.5	99	11000	10000	890
MAR												
13...	1045	867	2780	8.0	15.5	160	765	9.6	97	5100	20000	680
JUN												
06...	0800	753	2870	7.8	25.0	92	760	6.6	81	K400	1800	670
SEP												
24...	1000	715	3530	8.0	28.0	110	765	6.9	89	K3500	2000	880

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CaCO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD HCO3	CAR-BONATE WATER DIS IT FIELD CO3	ALKA-LINITY WAT DIS TOT IT FIELD CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)
DEC												
11...	660	190	100	480	54	7	10	276	0	226	830	570
MAR												
13...	480	140	79	370	54	6	10	244	0	200	690	430
JUN												
06...	450	140	77	360	53	6	12	264	0	216	690	390
SEP												
24...	630	190	98	460	53	7	11	310	0	254	880	550

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
DEC											
11...	0.30	12	2400	2370	3.26	0.410	0.390	9.00	8.90	0.820	0.810
MAR											
13...	0.50	10	1850	1880	2.52	0.470	0.460	5.90	6.00	2.70	4.2
JUN											
06...	0.50	11	1910	1840	2.60	0.860	0.860	5.60	5.60	1.10	3.3
SEP											
24...	0.70	13	2480	2390	3.37	0.450	0.420	8.00	7.70	0.370	1.2

10254670 ALAMO RIVER AT DROP NO. 3, NEAR CALIPATRIA CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P)	ALUM-INUM DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM DIS-SOLVED (UG/L AS BA)	BERYL-LIUM DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM DIS-SOLVED (UG/L AS CR)	COBALT DIS-SOLVED (UG/L AS CO)	COPPER DIS-SOLVED (UG/L AS CU)
DEC 11...	0.620	0.340	0.400	0.320	10	4	100	<10	<1.0	2	<1	7
MAR 13...	0.900	0.670	0.710	0.610	<10	4	<100	<10	<1.0	2	1	2
JUN 06...	0.520	0.430	0.420	0.380	<10	5	200	<10	<1.0	<1	<1	4
SEP 24...	0.270	0.190	0.180	0.170	<10	5	100	<10	<1.0	<10	<1	3

DATE	IRON DIS-SOLVED (UG/L AS FE)	LEAD DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGANESE DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYBDENUM DIS-SOLVED (UG/L AS MO)	NICKEL DIS-SOLVED (UG/L AS NI)	SELENIUM DIS-SOLVED (UG/L AS SE)	SILVER DIS-SOLVED (UG/L AS AG)	STRONTIUM DIS-SOLVED (UG/L AS SR)	VANADIUM DIS-SOLVED (UG/L AS V)	ZINC DIS-SOLVED (UG/L AS ZN)
DEC 11...	<10	<1	160	20	0.1	14	2	4	<1.0	3400	20	30
MAR 13...	10	<1	130	30	0.1	12	1	6	<1.0	2600	14	<10
JUN 06...	10	<1	140	20	0.1	13	2	6	<1.0	2700	17	<10
SEP 24...	<10	<1	190	<10	0.1	17	2	7	<1.0	3300	17	<10

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCTANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
MAR 13...	*	0935	7.60	15.0	2790	8.0	15.0	765	9.6	96	482	92
MAR 13...	*	0940	7.90	25.0	2790	8.0	15.0	765	9.7	97	518	80
MAR 13...	*	0950	10.4	33.0	2790	8.0	15.0	765	9.7	97	558	80
MAR 13...	*	0955	8.80	43.0	2810	7.9	15.5	765	9.6	97	648	73
MAR 13...	*	1000	6.90	54.0	2830	7.9	15.5	765	9.6	97	524	84
SEP 24...	*	0840	6.90	14.0	3550	7.9	27.5	765	6.9	88	359	93
SEP 24...	*	0850	7.30	24.0	3570	7.9	27.5	765	6.9	88	385	88
SEP 24...	*	0905	9.50	32.0	3580	7.9	27.5	765	6.9	88	500	73
SEP 24...	*	0910	9.00	40.0	3570	7.9	28.0	765	6.9	89	525	75
SEP 24...	*	0920	7.00	52.0	3580	7.9	28.0	765	6.8	88	433	85

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 13, 820 ft³/s, Sept. 24, 700 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-SOLVED CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 11...	0900	657	12.5	277	491	88
MAR 13...	0945	820	15.0	546	1210	82
MAR 13...	1045	867	15.5	672	1570	69
JUN 06...	0800	753	25.0	366	744	81
SEP 24...	0900	700	27.5	440	832	83
SEP 24...	1000	715	28.0	450	869	83

SALTON SEA BASIN

10254730 ALAMO RIVER NEAR NILAND, CA

LOCATION.--Lat 33°11'56", long 115°35'46", in SW 1/4 NW 1/4 sec.23, T.11 S., R.13 E., Imperial County, Hydrologic Unit 18100200, on left bank 1.0 mi upstream from mouth and 4.5 mi southwest of Niland.

PERIOD OF RECORD.--January 1943 to September 1960 (monthly discharge only, published in WSP 1743), October 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 220 ft below National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1986, at site 0.4 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. Discharge mainly represents seepage and return flow from irrigated areas.

COOPERATION.--Gage-height record provided by Imperial Irrigation District for the following dates: Oct. 13-23, Oct. 26 to Mar. 7, May 3 to Sept. 30.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,500 ft³/s, Aug. 17, 1977, estimated by Imperial Irrigation District; minimum daily, 288 ft³/s, Jan 2, 1966, Dec. 15, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,460 ft³/s, Oct. 2; minimum daily, 372 ft³/s, Jan. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	913	833	759	795	1280	766	1200	904	683	1070	795
2	1460	872	841	650	825	803	769	1150	938	731	997	752
3	1180	896	781	663	880	523	825	1220	946	738	904	752
4	982	880	781	963	825	463	924	1180	856	752	880	773
5	1110	980	825	795	803	468	969	1320	864	759	810	795
6	1030	997	825	625	818	431	1100	1230	872	731	773	938
7	882	1030	803	431	825	411	1200	1110	896	773	759	971
8	817	971	788	436	818	447	1180	1170	929	759	788	856
9	778	946	810	506	849	515	1160	1290	904	818	810	717
10	779	880	773	512	788	612	1150	1220	864	803	803	717
11	880	841	781	431	724	696	1170	1140	864	825	825	703
12	914	825	825	392	773	778	1120	1130	913	803	880	670
13	954	849	825	382	849	810	1110	1180	849	810	971	710
14	946	872	766	372	864	872	1150	1140	833	788	872	745
15	929	904	710	396	849	872	1190	1040	856	803	818	738
16	1010	904	724	452	888	874	1130	1040	864	803	773	724
17	1090	856	696	442	864	878	1170	1100	864	803	803	788
18	997	872	683	452	795	874	1200	1140	864	781	841	818
19	988	841	657	495	663	810	1270	1180	896	773	825	904
20	818	841	738	546	696	795	1220	1150	880	841	880	913
21	810	781	738	564	759	872	1150	1210	872	872	803	872
22	880	766	710	523	773	880	1040	1160	833	913	833	810
23	849	683	724	575	888	888	1100	1100	833	880	781	773
24	988	724	731	644	896	875	1100	1050	872	872	759	781
25	938	781	564	690	954	833	1110	1050	833	833	781	849
26	864	788	411	745	946	915	1160	1010	841	872	795	841
27	864	703	484	717	954	908	1160	913	825	856	825	888
28	856	738	676	690	1240	896	1230	929	818	896	766	880
29	856	803	759	752	---	799	1140	921	773	856	745	938
30	810	795	795	759	---	735	1200	921	724	872	752	980
31	841	---	833	825	---	742	---	904	---	904	752	---
TOTAL	29400	25532	22890	18184	23601	23555	33163	34498	25880	25203	25674	24391
MEAN	948	851	738	587	843	760	1105	1113	863	813	828	813
MAX	1460	1030	841	963	1240	1280	1270	1320	946	913	1070	980
MIN	778	683	411	372	663	411	766	904	724	683	745	670
AC-FT	58310	50640	45400	36070	46810	46720	65780	68430	51330	49990	50920	48380
CAL YR 1990	TOTAL 319237	MEAN 875	MAX 1460	MIN 411	AC-FT 633200							
WTR YR 1991	TOTAL 311971	MEAN 855	MAX 1460	MIN 372	AC-FT 618800							

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA

LOCATION.--Lat 32°39'57", long 115°30'08", in SW 1/4 SE 1/4 sec.14, T.17 S., R.14 E., Imperial County, Hydrologic Unit 18100200, on left bank 200 ft downstream from bridge on Second Street and 0.2 mi downstream from international boundary in Calexico.

PERIOD OF RECORD.--October 1979 to current year. October 1945 to September 1979, in files of Imperial Irrigation District.

CHEMICAL DATA: Water years 1969-71, 1973-85.

BIOLOGICAL DATA: Water years 1973-81.

SPECIFIC CONDUCTANCE: Water years 1974-81.

WATER TEMPERATURE: Water years 1974-81.

SEDIMENT DATA: Water years 1975-85.

GAGE.--Water-stage recorder. Elevation of gage is 35 ft below National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records excellent. Discharge represents seepage and return flow from irrigated areas.

AVERAGE DISCHARGE.--12 years (water years 1980-91), 275 ft³/s, 199,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 833 ft³/s, Dec. 9, 1982, gage height, 14.73 ft; minimum daily, 130 ft³/s, Nov. 29, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 321 ft³/s, Jan. 7, gage height, 10.24 ft; minimum daily, 153 ft³/s, June 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	159	163	203	182	218	205	184	158	167	196	173
2	197	156	166	202	181	236	192	178	163	168	200	185
3	207	155	175	207	185	241	192	175	173	184	199	182
4	210	156	177	242	187	234	194	182	192	194	192	179
5	188	167	169	257	188	231	196	179	199	185	180	178
6	185	166	166	277	191	222	206	179	193	182	169	183
7	185	166	170	307	188	198	196	181	192	182	170	192
8	170	166	169	298	196	183	184	190	196	168	170	201
9	154	164	171	282	191	182	181	209	192	163	163	214
10	158	166	174	270	181	182	183	220	184	163	163	186
11	160	167	173	281	176	173	186	193	182	160	176	185
12	164	170	177	272	175	169	181	193	175	164	181	189
13	167	168	175	260	176	175	180	195	176	168	187	191
14	166	171	178	260	181	176	183	197	171	161	202	194
15	166	170	178	240	174	185	196	210	171	171	206	200
16	171	175	183	229	173	174	201	227	173	194	200	204
17	178	175	181	212	171	172	207	215	169	191	201	220
18	172	170	199	201	162	170	199	202	165	195	200	223
19	166	173	204	194	158	179	189	188	167	188	199	216
20	162	169	216	192	158	182	191	182	164	182	190	210
21	162	166	220	192	166	176	186	184	164	180	189	195
22	166	168	212	185	184	169	182	181	162	178	188	188
23	164	162	210	185	192	178	178	182	163	185	188	196
24	162	161	215	175	189	178	181	180	156	180	185	199
25	162	159	221	169	178	182	183	174	153	180	173	205
26	164	161	226	171	166	203	182	169	162	178	167	196
27	164	163	245	176	177	203	183	171	174	178	166	187
28	162	156	237	187	197	197	186	160	179	179	168	180
29	159	154	246	183	---	199	195	163	182	181	174	184
30	163	157	233	183	---	201	192	167	178	186	176	177
31	160	---	216	179	---	200	---	159	---	193	174	---
TOTAL	5327	4936	6045	6871	5023	5968	5690	5769	5228	5528	5692	5812
MEAN	172	165	195	222	179	193	190	186	174	178	184	194
MAX	213	175	246	307	197	241	207	227	199	195	206	223
MIN	154	154	163	169	158	169	178	159	153	160	163	173
AC-FT	10570	9790	11990	13630	9960	11840	11290	11440	10370	10960	11290	11530

CAL YR 1990 TOTAL 68671 MEAN 188 MAX 263 MIN 150 AC-FT 136200
WTR YR 1991 TOTAL 67889 MEAN 186 MAX 307 MIN 153 AC-FT 134700

SALTON SEA BASIN

10255550 NEW RIVER NEAR WESTMORLAND, CA

LOCATION.--Lat 33°06'17", long 115°39'49", in SW 1/4 SW 1/4 sec.19, T.12 S., R.13 E., Imperial County, Hydrologic Unit 18100200, on right bank 3.5 mi upstream from mouth and 5.2 mi northwest of Westmorland.

PERIOD OF RECORD.--January 1943 to September 1960 (monthly discharge only, published in WSP 1734), October 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 220 ft below National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records excellent. Discharge mainly represents seepage and return flow from irrigated areas.

COOPERATION.--Gage height record provided by Imperial Irrigation District for the following dates: Oct. 24 to Nov. 1, July 12-14, 17-19, 22-26, 30, 31.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,000 ft³/s, Aug. 17, 18, 1977, estimated by Imperial Irrigation District; minimum daily, 293 ft³/s, Jan. 6, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,070 ft³/s, Aug. 2; minimum daily, 456 ft³/s, Nov. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	628	563	500	585	585	656	563	723	586	537	812	574
2	682	540	515	558	561	556	551	718	596	532	1070	562
3	663	520	515	549	557	504	582	673	616	555	743	546
4	662	505	529	602	545	503	610	665	631	579	632	565
5	639	531	527	557	557	503	629	677	623	577	557	576
6	623	546	514	546	550	504	636	699	646	577	536	582
7	594	545	509	537	538	502	671	739	634	570	535	594
8	573	527	516	553	543	511	704	713	638	580	528	601
9	566	531	528	528	560	519	712	697	647	576	546	562
10	575	568	512	533	571	543	710	664	627	562	567	519
11	566	580	531	512	565	577	682	669	626	549	566	514
12	559	579	530	502	587	590	676	706	649	552	573	508
13	577	517	516	505	574	603	710	684	624	562	592	534
14	594	512	502	491	577	608	700	709	641	536	550	566
15	596	517	476	493	539	613	712	700	635	e550	545	587
16	592	521	499	515	558	615	744	729	646	e580	553	611
17	593	506	512	508	522	631	715	740	651	605	564	623
18	609	503	517	510	500	639	706	735	634	631	563	617
19	591	474	520	513	505	642	711	703	636	582	564	634
20	569	491	555	524	531	626	742	685	608	e585	560	642
21	540	513	546	524	515	633	715	667	583	e600	540	637
22	534	518	560	519	516	631	708	630	568	600	552	626
23	530	506	544	539	533	606	687	623	544	603	544	597
24	517	506	517	533	553	601	685	611	542	582	580	559
25	526	500	499	546	575	614	677	628	538	586	585	561
26	537	475	524	535	621	674	662	588	574	550	588	563
27	550	458	525	548	617	677	690	594	575	e580	574	551
28	545	456	539	540	673	671	730	598	571	e580	547	560
29	556	477	546	561	---	584	750	593	557	e630	545	564
30	567	491	572	552	---	546	739	589	535	656	546	552
31	567	---	590	577	---	562	---	594	---	642	583	---
TOTAL	18020	15476	16285	16595	15628	18244	20509	20743	18181	17986	18340	17287
MEAN	581	516	525	535	558	589	684	669	606	580	592	576
MAX	682	580	590	602	673	677	750	740	651	656	1070	642
MIN	517	456	476	491	500	502	551	588	535	532	528	508
AC-FT	35740	30700	32300	32920	31000	36190	40680	41140	36060	35680	36380	34290

CAL YR 1990 TOTAL 216971 MEAN 594 MAX 749 MIN 456 AC-FT 430400
WTR YR 1991 TOTAL 213294 MEAN 584 MAX 1070 MIN 456 AC-FT 423100

e Estimated.

10255805 COYOTE CREEK BELOW BOX CANYON, NEAR BORREGO SPRINGS, CA

LOCATION.--Lat 33°21'54", long 116°24'57", in SW 1/4 NW 1/4 sec.25, T.9 S., R.5 E., San Diego County, Hydrologic Unit 18100200, in Anza-Borrego Desert State Park, on right bank 0.9 mi downstream from Box Canyon, 1.4 mi northwest of Rancho De Anza, and 7.8 mi northwest of Borrego Springs.

DRAINAGE AREA.--154 mi².

PERIOD OF RECORD.--October 1983 to current year. Published as Coyote Creek near Borrego Springs (station 10255800) water years 1984-86. Records for Coyote Creek near Borrego Springs prior to October 1983 not equivalent because of difference in drainage areas.

GAGE.--Water-stage recorder. Elevation of gage is 1,100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. Stage-discharge relation undefined above 2.0 ft³/s. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--8 years, 2.67 ft³/s, 1,930 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 67 ft³/s, Feb. 15, 1986, gage height, 2.39 ft; maximum gage height, 4.48 ft, Aug. 10, 1991; minimum daily, 0.06 ft³/s, July 29, Aug 12, 13, 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1230	unknown	4.04	Sept. 4	2115	unknown	4.13
Aug. 10	1745	unknown	*4.48				

Minimum daily, 0.06 ft³/s, July 29, Aug. 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.4	1.4	1.3	1.3	e27	1.4	.33	e.18	.09	.13	.49
2	1.7	1.4	1.4	1.5	1.3	2.3	1.4	.32	e.18	.07	.11	.56
3	1.8	1.4	1.4	1.3	1.3	1.9	1.3	.31	e.17	.07	.09	.68
4	1.8	1.5	1.4	1.4	1.3	1.5	1.2	.25	.23	.07	.08	e2.0
5	1.6	1.5	1.4	1.3	1.2	1.1	1.1	.23	.23	.07	.10	e.76
6	1.6	1.4	1.4	1.3	1.2	1.4	1.0	.42	.20	.09	.09	e.54
7	1.7	1.4	1.4	1.3	1.2	1.4	1.0	.43	.21	.08	.08	e.32
8	1.6	1.5	1.4	1.3	1.3	1.3	.94	.38	.21	.12	.08	e.35
9	1.6	1.5	1.4	1.3	1.3	1.3	.99	.46	.23	.24	.09	e.35
10	1.6	1.4	1.3	1.3	1.3	1.3	.97	.51	.24	.21	e4.5	e.82
11	1.6	1.3	1.3	1.3	1.3	1.4	.86	.51	.29	.20	.07	e.58
12	1.6	1.3	1.2	1.4	1.2	1.5	.81	.46	.26	.18	.06	e.50
13	1.6	1.3	1.3	1.4	1.3	1.5	.71	.40	.27	.16	.06	e.66
14	1.7	1.3	1.3	1.3	1.3	1.6	.64	.43	.28	.14	.12	e.62
15	1.6	1.3	1.3	1.3	1.3	1.6	.64	.37	.28	.14	.18	e.58
16	1.6	1.3	1.4	1.4	1.3	1.6	.92	.31	.22	.15	.20	e.58
17	1.6	1.3	1.3	1.4	1.4	1.5	.95	e.27	.21	.14	.14	e.50
18	1.6	1.4	1.4	1.4	1.3	1.5	.98	e.32	.23	.14	.12	e.54
19	1.7	1.5	1.4	1.3	1.3	1.6	.96	e.30	.20	.16	.14	e.70
20	1.5	1.4	1.3	1.3	1.3	1.9	.80	e.28	.18	.17	.13	e.70
21	1.4	1.3	1.3	1.3	1.4	1.6	.80	e.30	.22	.13	.13	e.70
22	1.5	1.5	1.2	1.4	1.3	1.5	.90	e.25	.21	.11	.13	e.58
23	1.4	1.5	1.2	1.4	1.2	1.5	.86	e.23	.16	.10	.14	e.66
24	1.5	1.4	1.3	1.4	1.0	1.6	.81	e.22	.15	.09	.18	e.54
25	1.4	1.4	1.3	1.4	1.0	1.6	.93	e.15	.12	.07	.28	e.46
26	1.3	1.5	1.3	1.4	1.1	1.8	.98	e.20	.13	.09	.27	e.39
27	1.3	1.5	1.2	1.4	1.2	2.7	.49	e.32	.13	.08	.28	e.58
28	1.4	1.5	1.1	1.3	1.7	2.1	.54	e.25	.11	.07	.25	e.46
29	1.3	1.4	1.0	1.5	---	1.8	.44	e.20	.15	.06	.35	e.35
30	1.3	1.4	1.0	1.4	---	1.5	.32	e.28	.13	.08	.31	e.46
31	1.3	---	1.0	1.4	---	1.5	---	e.22	---	e3.7	.30	---
TOTAL	47.9	42.2	40.0	42.1	35.6	75.4	26.64	9.91	6.01	7.27	9.19	18.01
MEAN	1.55	1.41	1.29	1.36	1.27	2.43	.89	.32	.20	.23	.30	.60
MAX	1.8	1.5	1.4	1.5	1.7	.27	1.4	.51	.29	3.7	4.5	2.0
MIN	1.3	1.3	1.0	1.3	1.0	1.1	.32	.15	.11	.06	.06	.32
AC-FT	95	84	79	84	71	150	53	20	12	14	18	36

CAL YR 1990 TOTAL 400.48 MEAN 1.10 MAX 3.0 MIN .56 AC-FT 794
WTR YR 1991 TOTAL 360.23 MEAN .99 MAX 27 MIN .06 AC-FT 715

e Estimated.

SALTON SEA BASIN

10255810 BORREGO PALM CREEK NEAR BORREGO SPRINGS, CA

LOCATION.--Lat 33°16'44", long 116°25'45", in Anza-Borrego Desert State Park, San Diego County, Hydrologic Unit 18100200, on left bank 3.3 mi northwest of Borrego Springs.

DRAINAGE AREA.--21.8 mi².

PERIOD OF RECORD.--October 1950 to current year. Prior to October 1960, published as Palm Canyon Creek near Borrego Springs. Monthly discharge only for October to November 1950, published in WSP 1734.

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair below 10 ft³/s, poor above. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--41 years, 0.94 ft³/s, 681 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,640 ft³/s, Aug. 16, 1979, gage height, 9.8 ft, from floodmarks, on basis of slope-area measurement of peak flow; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1530	*110	*4.59				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.10	.45	.58	61	6.9	1.1	.28	.00	.00	.00
2	.00	.00	.12	.44	.57	e12	5.9	1.3	.25	.00	.00	.00
3	.00	.00	.12	.53	.53	e5.2	5.5	1.2	.23	.00	.00	.00
4	.00	.00	.13	.90	.49	e3.3	5.0	1.1	.21	.00	.00	.00
5	.00	.00	.14	.72	.50	2.5	4.2	.96	.20	.00	.00	.00
6	.00	.00	.15	.55	.50	2.1	3.6	.85	.18	.00	.00	.00
7	.00	.00	.15	.52	.52	1.8	2.9	.80	.15	.00	.00	.00
8	.00	.00	.16	.51	.53	1.7	2.5	.71	.14	.00	.00	.00
9	.00	.00	.16	.61	.52	1.5	2.1	.80	.13	.00	.00	.00
10	.00	.00	.17	.92	.50	1.3	1.8	.95	.11	.00	.00	.00
11	.00	.00	.17	.64	.49	1.3	1.8	.97	.10	.00	.00	.00
12	.00	.00	.17	.58	.48	1.2	1.7	.82	.08	.00	.00	.00
13	.00	.00	.19	.56	.48	1.2	1.6	.75	.06	.00	.00	.00
14	.00	.00	.19	.54	.48	1.7	1.5	.77	.04	.00	.00	.00
15	.00	.00	.19	.54	.49	1.6	1.4	.68	.03	.00	.00	.00
16	.00	.00	.21	.51	.49	1.4	1.3	.59	.02	.00	.00	.00
17	.00	.00	.21	.50	.50	1.4	1.3	.55	.00	.00	.00	.00
18	.00	.00	.21	.53	.50	1.2	1.3	.57	.00	.00	.00	.00
19	.00	.00	.23	.56	.51	2.3	1.2	.55	.00	.00	.00	.00
20	.00	.00	.36	.57	.53	3.6	1.2	.52	.00	.00	.00	.00
21	.00	.00	.39	.59	.53	3.6	1.3	.51	.00	.00	.00	.00
22	.00	.00	.35	.56	.52	2.9	1.3	.48	.00	.00	.00	.00
23	.00	.00	.39	.56	.52	2.8	1.3	.45	.00	.00	.00	.00
24	.00	.00	.39	.59	.52	2.4	1.2	.38	.00	.00	.00	.00
25	.00	.00	.39	.62	.51	2.4	1.3	.33	.00	.00	.00	.00
26	.00	.00	.41	.64	.51	2.8	1.3	.28	.00	.00	.00	.00
27	.00	.00	.43	.60	1.2	5.5	1.1	.26	.00	.00	.00	.00
28	.00	.02	.43	.61	8.2	5.2	1.1	.24	.00	.00	.00	.00
29	.00	.05	.44	.62	---	6.5	1.1	.21	.00	.00	.00	.00
30	.00	.08	.45	.60	---	7.7	1.1	.21	.00	.00	.00	.00
31	.00	---	.45	.59	---	7.6	---	.29	---	.00	.00	---
TOTAL	0.00	0.15	8.05	18.26	22.70	158.7	66.8	20.18	2.21	0.00	0.00	0.00
MEAN	.000	.005	.26	.59	.81	5.12	2.23	.65	.074	.000	.000	.000
MAX	.00	.08	.45	.92	8.2	61	6.9	1.3	.28	.00	.00	.00
MIN	.00	.00	.10	.44	.48	1.2	1.1	.21	.00	.00	.00	.00
AC-FT	.00	.3	16	36	45	315	132	40	4.4	.00	.00	.00

CAL YR 1990 TOTAL 86.13 MEAN .24 MAX 2.5 MIN .00 AC-FT 171
WTR YR 1991 TOTAL 297.05 MEAN .81 MAX 61 MIN .00 AC-FT 589

e Estimated.

10255885 SAN FELIPE CREEK NEAR WESTMORLAND, CA

LOCATION.--Lat 33°07'26", long 115°51'08", in NW 1/4 SW 1/4 sec.17, T.12 S., R.11 E., Imperial County, Hydrologic Unit 18100200, on left bank 320 ft downstream from bridge on State Highway 86, 14.6 mi northwest of Westmorland, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--1,693 mi².

PERIOD OF RECORD.--December 1960 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 190 ft below National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 10, 1976, at site on left bank 320 ft downstream from bridge on State Highway 86 at different datum.

REMARKS.--Records poor. No regulation upstream from station. Diversion and pumping for domestic use and irrigation in Borrego Valley 25 mi upstream.

AVERAGE DISCHARGE.--30 years (water years 1962-91), 7.44 ft³/s, 5,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft³/s, Sept. 10, 1976, gage height, 19.0 ft, site and datum then in use, from rating curve extended above 500 ft³/s on basis of contracted-opening and flow-over-road measurement of peak flow; no flow for many days during most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s, and maximum (*) from rating curve extended above 820 ft³/s on basis of slope-area measurement at gage height 15.0 ft, from floodmark:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1100	1,810	9.08	Aug. 1	unknown	unknown	unknown
July 7	2400	*10,400	*14.19	Aug. 11	unknown	e8,700	unknown
July 19	unknown	unknown	unknown	Sept. 5	2300	e8,000	unknown

No flow several days in June and July.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	.25	.44	.44	.44	508	.01	.30	.02	e.02	e200	e.90
2	.09	.29	.44	.40	.47	21	.03	.16	.04	e.03	e1.0	e.80
3	.08	.33	.44	.44	.47	1.4	.09	.27	.03	e.02	e.80	e1.0
4	.08	.38	.44	.52	.50	.76	.29	.31	.03	e.00	e.70	e.90
5	.08	.44	.38	.40	.50	.57	.54	.30	.03	e.00	e.60	e700
6	.07	.50	.50	.38	.49	.32	.41	.27	.02	e.01	e.20	e240
7	.06	.38	.44	.36	.49	.32	.24	.18	.02	e393	e.30	e5.0
8	.07	.38	.50	.38	.42	.32	.27	.17	.02	e3.0	e.20	e2.0
9	.08	.44	.50	.47	.40	.31	.34	.08	.02	e2.0	e.20	e1.0
10	.10	.44	.38	.56	.44	.31	.35	.06	.02	e1.0	e.20	e.90
11	.13	.44	.33	.48	.47	.16	.20	.09	.02	e1.0	e700	e.90
12	.13	.44	.33	.50	.54	.16	.37	.11	.02	e.90	e2.0	e.90
13	.16	.44	.33	.50	.50	.16	.40	.12	.01	e.80	e1.0	e1.0
14	.16	.44	.33	.50	.50	.11	.47	.07	.01	e.80	e1.0	e.80
15	.20	.44	.29	.44	.56	.10	.54	.08	.00	e.70	e.80	e.90
16	.29	.38	.33	.42	.55	.11	.49	.08	.00	e.70	e.90	e1.0
17	.25	.38	.29	.38	.52	.12	.38	.04	.00	e.50	e.70	e.80
18	.25	.38	.29	.40	.50	.12	.38	.03	.00	e.50	e.70	e.90
19	.16	.38	.29	.44	.53	.11	.46	.05	.00	e100	e.60	e1.0
20	.13	.38	.33	.49	.66	.22	.43	.07	.00	e.60	e.50	e.90
21	.25	.38	.25	.50	.76	.13	.26	.05	.00	e.50	e.40	e1.0
22	.29	.38	.29	.48	.71	.09	.28	.06	.00	e.60	e.30	e.90
23	.29	.33	.29	.50	.71	.10	.33	.08	.00	e.50	e.40	e.90
24	.29	.38	.25	.50	.71	.10	.36	.06	.00	e.60	e.40	e.80
25	.33	.38	.33	.47	.71	.09	.28	.04	e.01	e.60	e.50	e1.0
26	.38	.33	.33	.44	.71	.61	.33	.03	e.00	e.50	e.50	e1.0
27	.33	.38	.33	.44	4.0	25	.40	.02	e.01	e.40	e.40	e.90
28	.33	.38	.38	.43	86	17	.37	.02	e.01	e.50	e.30	e1.0
29	.33	.44	.38	.38	---	.69	.37	.03	e.00	e.60	e.40	e.90
30	.33	.44	.33	.40	---	.15	.37	.01	e.01	e100	e.40	e.90
31	.25	---	.33	.40	---	.05	---	.01	---	e.00	e.50	---
TOTAL	8.97	11.75	11.09	13.84	104.26	578.69	10.04	3.25	0.35	610.38	916.90	970.90
MEAN	.29	.39	.36	.45	3.72	18.7	.33	.10	.012	19.7	29.6	32.4
MAX	3.0	.50	.50	.56	.86	508	.54	.31	.04	393	700	700
MIN	.06	.25	.25	.36	.40	.05	.01	.01	.00	.00	.20	.80
AC-FT	18	23	22	27	207	1150	20	6.4	.7	1210	1820	1930

CAL YR 1990 TOTAL 2186.60 MEAN 5.99 MAX 1340 MIN .00 AC-FT 4340
WTR YR 1991 TOTAL 3240.42 MEAN 8.88 MAX 700 MIN .00 AC-FT 6430

e Estimated.

SALTON SEA BASIN

10256060 WHITEWATER RIVER AT WHITE WATER CUTOFF, AT WHITE WATER, CA

LOCATION.--Lat 33°55'31", long 116°38'07", in NE 1/4 SE 1/4 sec.11, T.3 S., R.3 E., Riverside County, Hydrologic Unit 18100200, on center pier of White Water Cutoff (old Highway 99) bridge, 0.1 mi east of White Water, 0.75 mi downstream from Metropolitan Water District's Colorado River Aqueduct turnout, and 2.0 mi upstream from San Geronio River.

DRAINAGE AREA.--59.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year. Discharge measurements for the period October 1984 to September 1985 available in files of the U.S. Geological Survey. Discharge measurements only, October 1987 to September 1988, October 1990 to September 1991.

GAGE.--Water-stage recorder and concrete rectangular weir. Elevation of gage is 1,360 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Indeterminate stage-discharge relationship. At times, imported water is released to the Whitewater River from the Colorado River Aqueduct at a point 0.75 mi upstream. Water is diverted out of the basin 16.5 mi upstream to powerplants in the San Geronio River basin and then to an area north of Banning for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,020 ft³/s, Feb. 15, 1986, gage height, 11.97 ft, from rating curve extended above 900 ft³/s; no flow for many days in some years.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Time	Discharge (ft ³ /s)	Date	Time	Discharge (ft ³ /s)
Mar. 19	1040	0	July 18	0950	0
Apr. 16	0850	2.0	Sept. 26	0935	1.1
June 5	1115	0			

10256060 WHITEWATER RIVER AT WHITE WATER CUTOFF, AT WHITE WATER, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1972-76, 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	HARDNESS TOTAL (MG/L AS CaCO3)	HARDNESS NONCARB DISSOLV FLD. AS CaCO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)
OCT 12...	1100	--	921	8.4	22.0	290	--	71	27	90
APR 16...	0915	2.0	410	8.5	13.5	190	21	55	13	14

DATE	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE WATER FIELD (MG/L AS HCO3)	CARBONATE WATER FIELD (MG/L AS CO3)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)
OCT 12...	40	2	4.3	--	--	133	250	77	0.20	8.6
APR 16...	13	0.4	4.7	197	5	170	41	4.8	0.80	15

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS AC-FT)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
OCT 12...	612	608	0.83	0.010	0.100	0.030	<0.010	10	6	1
APR 16...	246	253	0.33	0.030	0.580	0.020	0.020	20	6	5

10256500 SNOW CREEK NEAR WHITE WATER, CA

LOCATION.--Lat 33°52'14", long 116°40'49", in NW 1/4 NW 1/4 sec.33, T.3 S., R.3 E., Riverside County, Hydrologic Unit 18100200, on left bank at upstream side of Desert Water Agency diversion dam, 0.1 mi downstream from East Fork, and 4.4 mi southwest of White Water.
DRAINAGE AREA.--10.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to December 1921, May 1922 to February 1927, December 1927 to September 1931, October 1959 to current year. Yearly discharges for 1929-31, published in WSP 1314. Discharge records for Snow Creek diversion (station 10256550) since October 1978, and those for creek only October 1978 through September 1988 available in files of the U.S. Geological Survey.

REVISED RECORDS.--WDR CA-89-1: Drainage area. WDR CA-90-1: 1980 Combined discharge.

GAGE.--Water-stage recorder and broad-crested weir on creek, water-stage recorder and weir on diversion. Elevation of gage is 2,000 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1931, at various sites within 500 ft of present site at different datums. October 1959 to Oct. 6, 1970, at site 40 ft upstream at present datum. Oct. 6, 1970, to Oct. 25, 1978, at site 290 ft upstream from diversion at present datum. Gage moved to present site 10 ft downstream from diversion Oct. 25, 1978.

REMARKS.--Records poor. No regulation upstream from station. Diversion 10 ft upstream, generally taking most of the base flow. For combined record of creek and diversion (station 10256501), see following page. Published record prior to 1989 represents entire flow from basin (combined creek plus diversion prior to March 1927 and October 1978 to September 1988; creek only, upstream from diversion, December 1927 to September 1931 and October 1959 to September 1978). Both creek only and combined flow published beginning October 1989.

COOPERATION.--Records for diversion provided by Desert Water Agency.

AVERAGE DISCHARGE.--Combined creek and diversion: 39 years (water years 1923-26, 1929-31, 1960-91), 9.49 ft³/s, 6,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (Combined creek and diversion)-- Maximum discharge, 13,000 ft³/s, Jan. 25, 1969, gage height, 13.8 ft, from floodmarks, site and datum then in use, from rating curve extended above 55 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 2.1 ft³/s, June 23-27, Sept. 5-11, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Creek only	Gage height (ft)	Combined creek and diversion
		Discharge (ft ³ /s)		Discharge (ft ³ /s)
Mar. 1	0715	*258	*4.20	*258
July 31	1245	162	3.82	163

Creek only: No flow for several days.

Combined creek and diversion: Minimum daily, 3.4 ft³/s, Nov. 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	2.0	2.5	7.1	2.4	e109	16	16	14	6.7	9.8	4.5
2	3.5	.04	2.4	7.1	2.4	e50	14	15	14	6.9	9.2	8.2
3	e2.1	.17	2.4	14	2.3	e32	16	14	13	7.6	5.4	9.3
4	e2.1	.00	2.4	17	2.3	e28	18	13	12	7.9	4.8	7.8
5	e2.1	.00	2.5	14	2.3	e26	25	13	17	7.9	4.3	7.3
6	e2.1	.00	2.7	9.9	2.3	e25	31	15	e19	8.0	4.0	7.2
7	e2.1	.42	2.9	8.5	2.3	e24	29	22	e21	7.7	3.8	7.0
8	e2.1	.56	3.0	7.9	2.3	e23	23	29	e21	8.6	3.7	6.7
9	e2.1	.00	2.7	7.6	2.3	e22	19	27	e22	8.3	3.7	4.3
10	e2.1	.00	2.5	7.8	2.3	e21	19	21	e22	6.6	6.0	3.0
11	e2.1	.00	3.8	7.7	2.3	e20	19	20	e23	6.5	8.6	2.9
12	e2.1	.00	6.1	7.5	4.4	e19	15	18	e23	6.0	8.0	2.8
13	e2.1	.51	6.5	7.5	5.9	e18	13	17	e23	5.7	7.7	2.8
14	2.1	2.4	6.5	4.6	4.4	e17	13	16	e18	5.7	7.3	2.7
15	2.2	2.7	6.5	2.9	2.4	e15	13	14	14	5.6	5.1	2.8
16	2.2	2.7	6.5	2.9	2.4	e14	13	16	14	5.6	3.6	2.7
17	2.2	2.7	4.0	3.0	2.5	e14	12	17	11	5.5	3.5	2.7
18	2.3	2.7	2.3	3.1	2.6	e13	12	16	13	5.7	3.4	2.9
19	2.4	3.9	4.4	3.1	2.6	e12	12	15	15	5.5	3.3	2.9
20	2.6	6.7	7.1	3.9	2.6	13	12	13	8.4	5.2	3.3	4.1
21	2.7	4.4	7.0	7.2	2.6	12	13	14	7.9	4.9	3.1	6.5
22	2.3	2.8	7.1	7.0	2.5	11	13	14	7.5	4.7	3.3	6.7
23	1.6	2.7	7.1	6.8	2.5	11	13	15	7.5	4.6	3.4	6.7
24	2.0	2.7	7.1	6.8	e2.6	11	13	18	7.2	4.6	3.5	5.3
25	2.0	2.7	7.1	6.8	e2.3	15	14	20	7.0	4.5	3.5	3.0
26	2.0	3.3	7.1	6.8	e2.3	14	14	19	6.8	4.5	3.4	4.3
27	2.1	3.1	7.1	6.8	e3.6	20	15	17	9.2	4.3	3.3	7.0
28	2.1	3.1	7.1	4.2	e21	20	16	15	9.0	4.1	3.1	6.8
29	2.2	2.9	7.1	2.5	---	19	16	15	7.2	4.1	2.9	6.8
30	2.3	2.8	7.1	2.4	---	17	16	16	6.8	4.5	2.8	4.4
31	2.6	---	7.1	2.4	---	16	---	16	---	28	2.8	---
TOTAL	72.3	58.00	157.7	206.8	94.7	681	487	526	413.5	206.0	143.6	152.1
MEAN	2.33	1.93	5.09	6.67	3.38	22.0	16.2	17.0	13.8	6.65	4.63	5.07
MAX	5.8	6.7	7.1	17	21	109	31	29	23	28	9.8	9.3
MIN	1.6	.00	2.3	2.4	2.3	11	12	13	6.8	4.1	2.8	2.7
AC-FT	143	115	313	410	188	1350	966	1040	820	409	285	302

CAL YR 1990 TOTAL 1121.92 MEAN 3.07 MAX 13 MIN .00 AC-FT 2230
WTR YR 1991 TOTAL 3198.70 MEAN 8.76 MAX 109 MIN .00 AC-FT 6340

e Estimated.

10256501 SNOW CREEK NEAR WHITE WATER, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SNOW CREEK
AND DIVERSION, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	5.0	6.1	7.1	6.2	e109	16	19	17	10	9.8	6.8
2	5.7	3.6	5.8	7.1	6.3	e50	14	18	17	11	10	8.2
3	e5.9	3.7	5.9	14	6.1	e32	18	17	15	11	9.2	9.3
4	e5.7	3.5	5.8	17	6.1	e28	22	16	12	11	8.6	7.8
5	e5.7	3.5	5.8	14	6.1	e26	29	16	17	11	8.1	7.3
6	e5.5	3.5	5.9	9.9	6.0	e25	35	18	e19	12	7.8	7.2
7	e5.7	3.9	6.1	8.5	5.9	e24	33	25	e21	11	7.6	7.0
8	e5.6	4.1	6.2	7.9	5.8	e23	27	32	e21	11	7.5	6.7
9	e5.5	3.5	5.9	7.6	5.8	e22	23	30	e22	11	7.4	6.6
10	e5.5	3.6	5.9	7.8	5.8	e21	23	23	e22	10	8.2	6.7
11	e5.5	3.4	5.9	7.7	5.8	e20	22	20	e23	10	8.6	6.5
12	e5.5	3.4	6.1	7.5	5.8	e19	18	18	e23	9.7	8.0	6.4
13	e5.5	3.8	6.5	7.5	5.9	e18	16	17	e23	9.3	7.7	6.4
14	5.4	5.7	6.5	7.0	6.0	e17	16	18	e20	9.3	7.3	6.3
15	5.4	5.6	6.5	6.7	e6.2	e15	16	18	17	9.2	7.4	6.3
16	5.4	5.6	6.5	6.5	6.0	e14	16	20	17	9.2	7.4	6.1
17	5.4	5.6	6.1	6.4	6.1	e14	15	21	15	9.1	7.2	6.1
18	5.5	5.7	6.1	6.5	6.2	e13	15	20	17	9.3	7.1	6.3
19	5.5	5.7	6.5	6.3	6.2	e12	15	19	19	9.0	6.9	6.3
20	5.7	6.7	7.1	6.5	6.1	13	15	17	12	8.6	6.9	6.3
21	5.8	5.9	7.0	7.2	6.1	12	16	18	12	8.3	6.7	6.5
22	5.4	6.0	7.1	7.0	5.9	11	16	18	11	8.1	6.9	6.7
23	5.0	5.9	7.1	6.8	5.9	11	16	18	11	8.0	6.8	6.7
24	5.3	5.7	7.1	6.8	e6.0	11	16	22	11	8.0	7.0	6.6
25	5.3	5.8	7.1	6.8	e5.7	15	17	23	11	7.9	6.9	6.6
26	5.3	5.8	7.1	6.8	e5.7	14	17	22	11	7.9	6.7	6.7
27	5.4	6.2	7.1	6.8	e5.7	20	18	20	11	7.7	6.7	7.0
28	5.4	6.3	7.1	6.5	e21	20	19	18	10	7.5	6.5	6.8
29	5.4	6.2	7.1	6.4	---	19	19	18	11	7.5	6.3	6.8
30	5.5	6.2	7.1	6.3	---	17	19	19	10	7.9	6.1	6.7
31	5.6	---	7.1	6.3	---	16	---	19	---	29	6.2	---
TOTAL	170.8	149.1	201.2	243.2	182.4	681	577	617	478	309.5	231.5	203.7
MEAN	5.51	4.97	6.49	7.85	6.51	22.0	19.2	19.9	15.9	9.98	7.47	6.79
MAX	5.9	6.7	7.1	17	21	109	35	32	23	29	10	9.3
MIN	5.0	3.4	5.8	6.3	5.7	11	14	16	10	7.5	6.1	6.1
AC-FT	339	296	399	482	362	1350	1140	1220	948	614	459	404

CAL YR 1990 TOTAL 1933.0 MEAN 5.30 MAX 13 MIN 2.8 AC-FT 3830
WTR YR 1991 TOTAL 4044.4 MEAN 11.1 MAX 109 MIN 3.4 AC-FT 8020

e Estimated.

79-91 - creek only stats
ROR - total flow

79-91 01

SALTON SEA BASIN

10256500 SNOW CREEK NEAR WHITE WATER, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1972-76, 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 12...	1500	5.5	113	7.9	15.0	36	--	13	0.91	10
APR 16...	1245	12	83	8.0	11.0	27	0	9.3	0.97	6.3

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT 12...	36	0.7	2.1	--	--	156	1.9	2.6	<0.10	19
APR 16...	32	0.5	1.7	48	0	39	1.3	2.1	<0.10	17

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 12...	82	83	0.11	<0.010	<0.100	0.030	<0.010	10	10	<1
APR 16...	64	62	0.09	<0.010	<0.050	<0.010	<0.010	20	11	<1

10257550 WHITEWATER RIVER AT WINDY POINT, NEAR WHITE WATER, CA

LOCATION.--Lat 33°53'56", long 116°37'13", in SW 1/4 NE 1/4 sec.24, T.3 S., R.3 E., Riverside County, Hydrologic Unit 18100200, on right bank 200 ft north of Highway 111, 2.0 mi southeast of White Water, and 3.8 mi east of the junction of Highway 111 and Interstate 10.

DRAINAGE AREA.--264 mi².

PERIOD OF RECORD.--October 1984 to September 1987, October 1989 to current year. Discharge measurements only, October 1987 to September 1989. Discharge measurements for the period July 1982 to September 1984 available in files of the U.S. Geological Survey.

REVISED RECORDS.--WDR CA-88-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,040 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. Imported water is released to the Whitewater River from the Colorado River Aqueduct at a point 2.75 mi upstream for ground-water recharge in the upper Coachella Valley. Water is diverted out of the basin 18.5 mi upstream to powerplants in the San Geronio River basin and then to an area north of Banning for irrigation.

AVERAGE DISCHARGE (unadjusted).--5 years (water years 1985-87, 1990-91), 163 ft³/s, 118,100 acre-ft/yr.

COOPERATION.--Records of diversion out of basin provided by Southern California Edison Co. Records of Colorado River Aqueduct releases provided by Coachella Valley Water District (from Metropolitan Water District's monthly reports).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,480 ft³/s, Mar. 1, 1991, gage height, 6.90 ft, from rating curve extended above 400 ft³/s on basis of critical depth computation; no flow for several days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,480 ft³/s, Mar. 1, gage height, 6.90 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	.00	.00	.00	1.7	e670	.00	.00	.00	.00	.00	.00
2	170	.00	.00	.00	.04	e50	.00	.00	.00	.00	.00	.00
3	170	.00	.06	8.6	.11	.00	.00	.00	.00	.00	.00	.00
4	167	.00	.49	20	.86	.00	.00	.00	.00	.00	.00	.00
5	172	.00	.22	15	.88	.00	.00	.00	.00	.00	.00	.00
6	167	.00	.36	8.3	2.5	.00	.00	.00	.00	.00	.00	.00
7	166	.00	2.1	6.9	.37	.00	.06	.00	.00	.00	.00	.00
8	173	.00	.78	6.4	.00	.00	.65	.00	.00	.00	.00	.00
9	174	.00	.00	5.1	.00	.00	.00	.00	.00	.00	.00	.00
10	172	.00	.17	4.2	.00	.00	.00	.00	.00	.00	.00	.00
11	174	.00	.00	2.2	.00	.00	.07	.00	.00	.00	.00	.00
12	174	.00	.09	2.7	.00	.00	.00	.00	.00	.00	.00	.00
13	174	.00	.38	2.9	.00	.00	.00	.00	.00	.00	.00	.00
14	174	.00	.21	1.4	.00	.00	.00	.00	.00	.00	.00	.00
15	174	.00	.28	2.3	.00	.00	.00	.00	.00	.00	.00	.00
16	174	.00	.00	3.1	.00	.00	.00	.00	.00	.00	.00	.00
17	160	12	.04	1.4	.00	.00	.00	.08	.00	.00	.00	.00
18	80	.00	.40	1.3	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	e.40	.35	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	3.5	e1.4	.25	.00	e110	.00	.00	.00	.00	.00	.00
21	.00	5.6	.55	3.2	.00	e2.0	.00	.00	.00	.00	.00	.00
22	.00	3.4	.42	1.4	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	1.8	.00	2.0	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.01	.00	1.9	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	2.0	.00	.60	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	4.7	.00	.08	1.9	e270	.00	.00	.00	.00	.00	.00
28	.00	1.7	.65	.16	80	e.20	.00	.00	.00	.00	.00	.00
29	.00	1.6	.00	.80	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.57	.00	.87	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	1.6	---	.00	---	.00	---	.00	.00	---
TOTAL	2985.00	36.88	9.00	106.61	88.36	1102.20	0.78	0.08	0.00	0.00	0.00	0.00
MEAN	96.3	1.23	.29	3.44	3.16	35.6	.026	.003	.000	.000	.000	.000
MAX	174	12	2.1	20	80	670	.65	.08	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	5920	73	18	211	175	2190	1.5	.2	.00	.00	.00	.00
a	7982	34	0	0	0	0	0	14	0	0	0	0
b	7.3	23	28	20	33	46	54	166	142	178	149	122

CAL YR 1990 TOTAL 13463.94 MEAN 36.9 MAX 459 MIN .00 AC-FT 26710 a 31721 b 790.3
WTR YR 1991 TOTAL 4328.91 MEAN 11.9 MAX 670 MIN .00 AC-FT 8590 a 8030 b 957

e Estimated.

a Discharge, in acre-feet, of imported water released to river 2.75 mi upstream.

b Discharge, in acre-feet, diverted out of basin 18.5 mi upstream.

10257600 MISSION CREEK NEAR DESERT HOT SPRINGS, CA

LOCATION.--Lat 34°00'40", long 116°37'38", in NE 1/4 SW 1/4 sec.12, T.2 S., R.3 E., Riverside County, Hydrologic Unit 18100200, in Mission Creek Indian Reservation, 0.6 mi downstream from West Fork, and 6.8 mi northwest of Desert Hot Springs.

DRAINAGE AREA.--35.7 mi².

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. Slight regulation of low flow by two small dams with a combined capacity of about 3 acre-ft, 2 mi upstream from station.

AVERAGE DISCHARGE.--24 years, 3.14 ft³/s, 2,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft³/s, Aug. 17, 1983, gage height, 3.33 ft on basis of slope-conveyance study of peak flow; maximum gage height, 6.40 ft, Jan. 25, 1969; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0700	*173	*3.30				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e24	.00	.48	.73	.49	.18	.09
2	.00	.00	.00	.00	.00	e1.2	.00	1.2	.73	.47	.17	.09
3	.00	.00	.00	.00	.00	e.05	.00	.56	.71	.47	.17	.09
4	.00	.00	.00	.00	.00	e.00	.00	.03	.70	.48	.17	.08
5	.00	.00	.00	.00	.00	e.00	.00	.00	.71	.48	.18	.10
6	.00	.00	.00	.00	.00	e.00	.00	.00	.74	.49	.18	.11
7	.00	.00	.00	.00	.00	e.00	.00	.00	.64	.47	.18	.09
8	.00	.00	.00	.00	.00	e.00	.00	.00	.60	.45	.15	.08
9	.00	.00	.00	.00	.00	e.00	.00	.00	.60	.45	.14	.08
10	.00	.00	.00	.00	.00	e.00	.04	.00	.58	.44	.14	.09
11	.00	.00	.00	.00	.00	e.00	.00	.57	.60	.44	.22	.09
12	.00	.00	.00	.00	.00	.00	.00	.65	.61	.43	.22	.08
13	.00	.00	.00	.00	.00	.00	.00	1.1	.62	.42	.20	.08
14	.00	.00	.00	.00	.00	.00	.00	3.7	.64	.40	.19	.07
15	.00	.00	.00	.00	.00	.00	.00	7.2	.62	.36	.19	.06
16	.00	.00	.00	.00	.00	.00	.00	e1.6	.56	.36	.19	.05
17	.00	.00	.00	.00	.00	.00	.31	e1.4	.54	.36	.18	.04
18	.00	.00	.00	.00	.00	.00	.18	e1.4	.53	.36	.17	.05
19	.00	.00	.00	.00	.00	.00	.17	e1.4	.54	.37	.16	.05
20	.00	.00	.00	.00	.00	.00	.27	e1.4	.55	.34	.15	.05
21	.00	.00	.00	.00	.00	.00	.06	e1.2	.55	.33	.15	.05
22	.00	.00	.00	.00	.00	.00	.00	e1.2	.54	.32	.14	.04
23	.00	.00	.00	.00	.00	.00	.00	e1.2	.54	.30	.14	.03
24	.00	.00	.00	.00	.00	.00	.00	e1.1	.55	.26	.13	.03
25	.00	.00	.00	.00	.00	.00	.00	e1.1	.56	.26	.13	.02
26	.00	.00	.00	.00	.00	.00	.00	e1.1	.56	.25	.13	.02
27	.00	.00	.00	.00	.02	.03	.13	e1.0	.57	.21	.12	.04
28	.00	.00	.00	.00	.76	.00	.36	e.95	.57	.18	.11	.05
29	.00	.00	.00	.00	---	.01	.26	e.95	.57	.17	.10	.04
30	.00	.00	.00	.00	---	.00	.35	e.90	.51	.18	.09	.03
31	.00	---	.00	.00	---	.06	---	e.80	---	.20	.09	---
TOTAL	0.00	0.00	0.00	0.00	0.78	25.35	2.13	34.19	18.07	11.19	4.86	1.87
MEAN	.000	.000	.000	.000	.028	.82	.071	1.10	.60	.36	.16	.062
MAX	.00	.00	.00	.00	.76	24	.36	7.2	.74	.49	.22	.11
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.51	.17	.09	.02
AC-FT	.00	.00	.00	.00	1.5	50	4.2	68	36	22	9.6	3.7

CAL YR 1990 TOTAL 0.06 MEAN .000 MAX .06 MIN .00 AC-FT .1
WTR YR 1991 TOTAL 98.44 MEAN .27 MAX 24 MIN .00 AC-FT 195

e Estimated.

10257720 CHINO CANYON CREEK BELOW TRAMWAY, NEAR PALM SPRINGS, CA

LOCATION.--Lat 33°50'39", long 116°36'16", in NW 1/4 NE 1/4 sec.7, T.4 S., R.4 E., Riverside County, Hydrologic Unit 18100200, on left bank 0.5 mi downstream from tram building, 3.5 mi west of Highway 111 on road leading to Palm Springs aerial tramway, and 5.5 mi west of Palm Springs.

DRAINAGE AREA.--4.71 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1986 to current year.

REVISED RECORDS.--WDR CA-89-1: 1987(M).

GAGE.--Water-stage recorder. Elevation of gage is 2,100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. Two small diversions 2 mi upstream, one for city of Palm Springs and one for Palm Springs aerial tramway.

AVERAGE DISCHARGE.--5 years, 0.41 ft³/s, 287 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62 ft³/s, Aug. 9, 1989, gage height, 9.95 ft, from rating curve extended above 2.0 ft³/s on basis of critical depth computation; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18 ft³/s, Mar. 1, gage height, 9.30 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.01	7.2	1.5	.70	.40	.09	.00	.00
2	.00	.00	.00	.00	.00	4.3	1.4	.72	.29	.06	.01	.00
3	.00	.00	.00	.26	.00	3.8	1.6	.68	.23	.07	.02	.00
4	.00	.00	.00	.26	.00	3.7	1.5	.68	.21	.04	.01	.00
5	.00	.00	.00	.10	.00	3.5	1.5	.61	.22	.05	.02	.00
6	.00	.00	.00	.01	.00	3.1	1.6	.54	.22	.05	.03	.00
7	.00	.00	.00	.00	.00	2.7	1.6	.49	.24	.05	.02	.00
8	.00	.00	.00	.00	.00	2.4	1.5	.46	.22	.07	.01	.00
9	.00	.00	.00	.01	.00	2.2	1.5	.48	.18	.02	.01	.00
10	.00	.00	.00	.02	.00	2.0	1.5	.60	.20	.04	.01	.01
11	.00	.00	.00	.03	.00	2.0	1.5	.63	.26	.07	.00	.01
12	.00	.00	.00	.01	.00	1.8	1.5	.65	.24	.05	.00	.00
13	.00	.00	.00	.00	.00	1.6	1.3	.62	.25	.04	.00	.00
14	.00	.00	.00	.00	.00	1.5	1.3	.62	.27	.04	.00	.00
15	.00	.00	.00	.00	.00	1.3	1.2	.52	.28	.04	.01	.00
16	.00	.00	.00	.01	.00	1.2	1.2	.40	.27	.04	.02	.00
17	.00	.00	.00	.01	.00	.98	1.2	.38	.24	.04	.01	.00
18	.00	.00	.00	.01	.01	.84	1.1	.43	.22	.03	.01	.01
19	.00	.00	.00	.01	.01	.73	.98	.42	.22	.04	.01	.00
20	.00	.00	.00	.03	.00	1.0	1.0	.40	.21	.04	.01	.00
21	.00	.00	.00	.02	.00	.95	1.0	.40	.21	.03	.00	.00
22	.00	.00	.00	.02	.00	.81	.99	.38	.19	.03	.00	.00
23	.00	.00	.00	.03	.00	.81	.89	.36	.18	.03	.00	.00
24	.00	.00	.00	.02	.00	.76	.92	.36	.17	.03	.00	.00
25	.00	.00	.00	.02	.00	.84	.88	.32	.16	.03	.00	.00
26	.00	.00	.00	.01	.00	.99	.86	.32	.16	.03	.00	.00
27	.00	.00	.00	.01	.57	1.7	.79	.31	.17	.02	.00	.00
28	.00	.00	.00	.02	2.1	1.4	.69	.29	.15	.02	.01	.00
29	.00	.00	.00	.01	---	1.3	.75	.25	.17	.01	.01	.00
30	.00	.00	.00	.02	---	1.5	.66	.36	.11	.02	.01	.00
31	.00	---	.00	.02	---	1.5	---	.36	---	.40	.01	---
TOTAL	0.00	0.00	0.00	0.97	2.70	60.41	35.91	14.74	6.54	1.62	0.25	0.03
MEAN	.000	.000	.000	.031	.096	1.95	1.20	.48	.22	.052	.008	.001
MAX	.00	.00	.00	.26	2.1	7.2	1.6	.72	.40	.40	.03	.01
MIN	.00	.00	.00	.00	.00	.73	.66	.25	.11	.01	.00	.00
AC-FT	.00	.00	.00	1.9	5.4	120	71	29	13	3.2	.5	.06

CAL YR 1990 TOTAL 40.11 MEAN .11 MAX .91 MIN .00 AC-FT 80
WTR YR 1991 TOTAL 123.17 MEAN .34 MAX 7.2 MIN .00 AC-FT 244

10257720 CHINO CANYON CREEK BELOW TRAMWAY, NEAR PALM SPRINGS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR 15...	1515	1.2	215	8.2	15.5	86	0	30	2.8	11
DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)
APR 15...	20	0.5	5.6	114	6	103	7.3	3.9	<0.10	17
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
APR 15...	131	142	0.18	<0.010	0.460	<0.010	<0.010	20	4	1

10258000 TAHQUITZ CREEK NEAR PALM SPRINGS, CA

LOCATION.--Lat 33°48'18", long 116°33'30", in SW 1/4 SW 1/4 sec.22, T.4 S., R.4 E., Riverside County, Hydrologic Unit 18100200, 2.2 mi southwest of Palm Springs and 7 mi upstream from mouth.

DRAINAGE AREA.--16.9 mi².

PERIOD OF RECORD.--October 1947 to September 1982, October 1983 to current year.

REVISED RECORDS.--WDR CA-88-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 762.5 ft above National Geodetic Vertical Datum of 1929 (levels by Riverside County Flood Control District). Prior to Aug. 25, 1970, at datum 2.00 ft higher.

REMARKS.--Records poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--43 years (water years 1948-82, 1984-91), 4.93 ft³/s, 3,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,900 ft³/s, Nov. 22, 1965, Jan. 25, 1969, gage height, 12.34 ft, from rating curve extended above 70 ft³/s on basis of slope-area measurements at gage heights 10.45 and 12.34 ft; maximum gage height, 15.78 ft, Sept. 7, 1981, from debris wave produced by thunderstorm following a brushfire; no flow for parts of most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 85 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0800	*248	*7.30				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.19	e.26	102	4.1	10	15	4.8	5.1	.20
2	.00	.00	.00	.18	e.26	e19	3.9	9.5	14	4.5	2.9	.30
3	.00	.00	.00	.25	e.26	7.2	3.9	9.1	14	4.3	2.0	.25
4	.00	.00	.00	.35	e.24	5.4	4.2	9.1	15	4.1	1.6	.24
5	.00	.00	.00	.62	e.24	7.8	5.6	9.6	14	4.0	1.3	.24
6	.00	.00	.00	.58	e.24	6.3	8.4	11	14	4.0	1.1	.27
7	.00	.00	.00	.53	e.24	4.3	8.5	14	13	4.0	.97	.25
8	.00	.00	.00	.52	e.22	3.3	8.1	18	12	4.0	.70	.24
9	.00	.00	.00	.53	e.22	2.6	7.3	20	12	4.0	.59	.23
10	.00	.00	.00	.40	e.22	2.2	7.5	16	11	3.7	.58	.21
11	.00	.00	.00	.30	e.21	2.0	8.0	13	11	3.2	.80	.15
12	.00	.00	.00	.29	e.20	1.8	6.5	12	11	3.4	.93	.14
13	.00	.00	.00	.31	e.20	1.8	5.9	13	11	3.1	.84	.14
14	.00	.00	.00	.29	e.22	2.0	5.9	14	10	2.9	.73	.14
15	.00	.00	.00	e.31	e.22	1.9	6.6	14	9.4	2.8	.61	.14
16	.00	.00	.00	e.30	e.22	1.8	6.6	16	8.7	2.6	.43	.14
17	.00	.00	.00	e.29	e.24	1.7	6.4	17	8.1	2.1	.34	.11
18	.00	.00	.00	e.28	e.24	1.6	6.2	16	7.7	2.1	.28	.17
19	.00	.00	.00	e.28	e.26	1.8	6.3	15	7.4	1.8	.23	.12
20	.00	.00	.00	e.27	e.26	2.4	7.0	16	6.9	1.7	.19	.07
21	.00	.00	.00	e.60	.26	2.1	6.9	16	7.0	1.6	.15	.04
22	.00	.00	.00	e.45	.27	1.9	6.7	16	6.9	1.5	.13	.03
23	.00	.00	.00	e.40	.26	1.8	6.9	15	6.7	1.4	.11	.05
24	.00	.00	.01	e.35	.27	1.8	7.4	15	e6.4	1.3	.09	.07
25	.00	.00	.02	e.30	.28	2.1	7.9	17	e6.1	1.3	.09	.09
26	.00	.00	.04	e.30	.28	2.3	8.2	18	e5.8	1.3	.09	.10
27	.00	.00	.05	e.30	.48	5.6	8.6	17	e5.6	1.2	.06	.16
28	.00	.00	.07	e.28	5.5	3.9	8.9	16	e5.3	1.0	.06	.13
29	.00	.00	.09	e.28	---	3.9	8.8	15	e5.0	.92	.06	.10
30	.00	.00	.14	e.28	---	4.0	9.4	16	e4.7	1.0	.05	.13
31	.00	---	.18	e.26	---	4.1	---	16	---	3.9	.05	---
TOTAL	0.00	0.00	0.60	10.87	12.27	212.4	206.6	449.3	284.7	83.52	23.16	4.65
MEAN	.000	.000	.019	.35	.44	6.85	6.89	14.5	9.49	2.69	.75	.15
MAX	.00	.00	.18	.62	5.5	102	9.4	20	15	4.8	5.1	.30
MIN	.00	.00	.00	.18	.20	1.6	3.9	9.1	4.7	.92	.05	.03
AC-FT	.00	.00	1.2	22	24	421	410	891	565	166	46	9.2

CAL YR 1990 TOTAL 110.69 MEAN .30 MAX 6.8 MIN .00 AC-FT 220
WTR YR 1991 TOTAL 1288.07 MEAN 3.53 MAX 102 MIN .00 AC-FT 2550

e Estimated.

10258500 PALM CANYON CREEK NEAR PALM SPRINGS, CA

LOCATION.--Lat 33°44'42", long 116°32'05", in SW 1/4 SE 1/4 sec.11, T.5 S., R.4 E., Riverside County, Hydrologic Unit 18100200, on right bank 0.8 mi upstream from Murray Canyon Creek and 6 mi south of Palm Springs.

DRAINAGE AREA.--93.1 mi².

PERIOD OF RECORD.--January 1930 to January 1942, October 1947 to current year.

REVISED RECORDS.--WDR CA-88-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 700 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 14, 1942, at datum 0.2 ft higher.

REMARKS.--Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--55 years (water years 1931-41, 1948-91), 5.02 ft³/s, 3,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,000 ft³/s, Feb. 21, 1980, gage height, 7.29 ft, from rating curve extended above 650 ft³/s on basis of slope-area measurement at gage height 6.38 ft; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0815	*1,490	*6.80	July 31	1430	196	3.61
Mar. 27	0830	222	3.75				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	699	27	1.7	.00	.00	3.6	.00
2	.00	.00	.00	.00	.00	107	22	1.8	.00	.00	1.2	.00
3	.00	.00	.00	.00	.00	e27	19	1.8	.00	.00	.49	.00
4	.00	.00	.00	.00	.00	e14	17	1.6	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	e8.6	16	1.4	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	e5.0	16	1.3	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	e4.0	14	1.1	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	e3.1	12	1.0	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	e2.9	9.9	.95	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	e2.2	8.8	1.0	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	e1.9	7.9	1.0	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	e1.5	7.3	.96	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	e3.5	6.2	.89	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	e3.1	5.5	.85	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	e2.7	4.9	.80	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	e2.3	e4.5	.57	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	e2.0	4.2	.32	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	1.7	4.0	.42	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	6.8	3.7	.42	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	39	3.4	.33	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	25	3.3	.18	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	15	3.2	.12	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	13	3.1	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	11	2.9	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	13	2.8	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	17	2.7	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	114	2.4	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	5.9	70	2.2	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	87	2.0	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	49	1.9	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	35	---	.00	---	22	.00	---
TOTAL	0.00	0.00	0.00	0.00	5.90	1366.3	239.8	20.51	0.00	22.00	5.29	0.00
MEAN	.000	.000	.000	.000	.21	44.1	7.99	.66	.000	.71	.17	.000
MAX	.00	.00	.00	.00	5.9	699	27	1.8	.00	.22	3.6	.00
MIN	.00	.00	.00	.00	.00	1.5	1.9	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	12	2710	476	41	.00	44	10	.00
CAL YR 1990	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00		
WTR YR 1991	TOTAL	1659.80	MEAN	4.55	MAX	699	MIN	.00	AC-FT	3290		

e Estimated.

10259000 ANDREAS CREEK NEAR PALM SPRINGS, CA

LOCATION.--Lat 33°45'36", Long 116°32'57", in SE 1/4 SE 1/4 sec.3, T.5 S., R.4 E., Riverside County, Hydrologic Unit 18100200, on left bank at U.S. Bureau of Indian Affairs diversion dam, 1.1 mi upstream from mouth, and 5.1 mi south of Palm Springs.

DRAINAGE AREA.--8.65 mi².

PERIOD OF RECORD.--October 1948 to current year.

REVISED RECORDS.--WDR CA-88-1; Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 800 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 25, 1949, reference point at same site at different datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation upstream from station. One small diversion for domestic use about 1 mi upstream from station.

AVERAGE DISCHARGE.--43 years, 2.92 ft³/s, 2,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,960 ft³/s, Aug. 31, 1954, gage height, 7.11 ft, from rating curve extended above 80 ft³/s on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*), from rating curve extended above 30 ft³/s by theoretical computations of flow over weir:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0715	*165	*3.92				

Minimum daily, 0.55 ft³/s, Oct. 6, 12.

REVISIONS.--The maximum discharges for water years 1986, 1988 have been revised to 135 ft³/s, Feb. 15, 1986, gage height, 3.79 ft; 153 ft³/s, Aug. 24, 1988, gage height, 3.87 ft, superseding figures published in reports for 1986, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	.83	1.1	1.3	1.1	71	7.0	4.6	2.3	1.5	1.5	.97
2	.78	.91	1.1	1.3	1.1	16	6.7	4.5	2.3	1.4	1.3	1.2
3	.70	.92	1.1	1.7	1.1	8.5	6.6	4.2	2.2	1.4	1.2	1.1
4	.62	.91	1.1	2.2	1.1	7.7	6.7	4.0	2.1	1.5	1.1	1.0
5	.58	.92	1.2	2.1	1.1	12	7.6	4.0	2.0	1.5	1.1	1.1
6	.55	.92	1.1	1.7	1.1	7.3	8.3	4.2	1.9	1.5	1.2	1.2
7	.60	.93	1.1	1.6	1.0	5.3	8.1	4.4	1.9	1.5	1.2	1.1
8	.56	.92	1.2	1.6	1.0	4.3	7.6	4.7	4.0	1.5	1.1	.95
9	.57	.90	1.1	1.6	1.0	3.6	7.0	4.6	7.2	1.4	1.1	.93
10	.56	.89	1.1	1.6	.99	3.2	6.4	4.2	6.7	1.4	1.3	.96
11	.57	.92	1.2	1.6	.99	3.2	6.5	3.8	5.5	1.4	1.5	.98
12	.55	.93	1.2	1.5	.99	3.0	5.8	3.6	3.3	1.4	1.4	.95
13	.56	.94	1.2	1.5	.99	3.8	5.4	3.5	2.0	1.3	1.3	.96
14	.60	.97	1.2	1.4	.99	4.0	5.4	3.6	2.0	1.2	1.2	.98
15	.65	.98	1.2	1.4	.98	3.7	5.4	3.3	1.9	1.2	1.1	.99
16	.70	.98	1.2	1.4	.98	3.3	5.2	3.4	1.7	1.2	1.1	.93
17	.70	1.0	1.2	1.3	.99	3.2	5.0	3.4	1.6	1.2	1.1	.86
18	.75	1.0	1.2	1.4	.98	3.1	4.8	3.3	1.5	1.3	1.0	.99
19	.73	1.1	1.2	1.4	1.0	4.8	4.9	3.4	1.5	1.3	1.0	1.0
20	.72	1.3	1.6	1.4	1.0	5.4	5.0	3.0	1.5	1.3	.99	1.1
21	.71	1.2	1.4	1.4	.98	4.6	4.9	3.0	1.5	1.3	.97	1.0
22	.71	1.1	1.4	1.3	.99	4.3	5.0	2.9	1.5	1.3	.98	1.0
23	.72	1.1	1.4	1.3	.99	4.2	4.9	2.8	1.5	1.3	1.0	.91
24	.72	1.1	1.4	1.3	.98	4.2	5.0	2.7	1.5	1.3	.98	.85
25	.73	1.1	1.3	1.2	.96	5.2	5.2	2.6	1.6	1.2	1.0	.85
26	.70	1.4	1.3	1.2	.99	5.1	5.0	2.6	1.6	1.3	1.0	.91
27	.72	1.2	1.3	1.2	2.0	9.0	4.8	2.6	1.8	1.2	1.0	.91
28	.73	1.2	1.3	1.2	14	7.6	4.8	2.4	1.8	1.1	.92	.89
29	.74	1.1	1.3	1.2	---	7.4	4.6	2.3	1.7	1.1	.94	.89
30	.77	1.2	1.3	1.2	---	7.2	4.7	2.3	1.6	1.3	.92	.84
31	.75	---	1.2	1.2	---	7.0	---	2.4	---	1.9	.90	---
TOTAL	20.82	30.87	38.2	44.7	42.37	242.2	174.3	106.3	71.2	41.7	34.40	29.30
MEAN	.67	1.03	1.23	1.44	1.51	7.81	5.81	3.43	2.37	1.35	1.11	.98
MAX	.78	1.4	1.6	2.2	14	71	8.3	4.7	7.2	1.9	1.5	1.2
MIN	.55	.83	1.1	1.2	.96	3.0	4.6	2.3	1.5	1.1	.90	.84
AC-FT	41	61	76	89	84	480	346	211	141	83	68	58

CAL YR 1990 TOTAL 427.71 MEAN 1.17 MAX 3.2 MIN .52 AC-FT 848
WTR YR 1991 TOTAL 876.36 MEAN 2.40 MAX 71 MIN .55 AC-FT 1740

SALTON SEA BASIN

10259050 PALM CANYON WASH NEAR CATHEDRAL CITY, CA

LOCATION.--Lat 33°47'49", long 116°28'44", in SE 1/4 NE 1/4 sec.29, T.5 S., R.4 E., Riverside County, Hydrologic Unit 18100200, on right bank 500 ft downstream from Golf Club Drive, 0.4 mi upstream from Whitewater River, and 1.5 mi northeast of Cathedral City.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--January 1988 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 330 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation upstream from station. Two diversions for domestic use upstream from station on Andreas Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,210 ft³/s, Mar. 1, 1991, gage height, 4.38 ft, from rating curve extended above 850 ft³/s on basis of critical-depth computation at gage height 3.85 ft; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft³/s, Mar. 1, gage height 4.38 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	404	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	16	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	26	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.21	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	5.0	e15	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	20	e.50	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	16	.00	---
TOTAL	0.00	0.00	0.00	0.00	25.00	461.71	0.00	0.00	0.00	16.00	0.00	0.00
MEAN	.000	.000	.000	.000	.89	14.9	.000	.000	.000	.52	.000	.000
MAX	.00	.00	.00	.00	20	404	.00	.00	.00	16	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	50	916	.00	.00	.00	32	.00	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 502.71 MEAN 1.38 MAX 404 MIN .00 AC-FT 997

e Estimated.

SALTON SEA BASIN

63

10259100 WHITEWATER RIVER AT RANCHO MIRAGE, CA

LOCATION.--Lat 33°44'58", long 116°25'19", in NW 1/4 SW 1/4 sec.12, T.5 S., R.5 E., Riverside County, Hydrologic Unit 18100200, on right bank 0.2 mi upstream from Magnesia Spring Canyon storm channel and 2.7 mi northwest of the intersection of Highways 111 and 74.

DRAINAGE AREA.--588 mi².

PERIOD OF RECORD.--March 1989 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. No regulation upstream from station. Water diverted from tributary streams for municipal supply in vicinity of Palm Springs. Water from the Colorado River basin is imported for ground-water recharge and irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 428 ft³/s, Mar. 1, 1991, gage height, 3.92 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 428 ft³/s, Mar. 1, gage height, 3.92 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e218	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	e12	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.68	.00	e.80	.05	.00	.00	.05	.00	.00
4	.00	.00	.00	.20	.00	.62	.00	.00	.00	.00	.00	.75
5	.00	.00	.00	.00	.15	.62	.10	.00	.01	.00	.00	.67
6	.00	.00	.00	.00	.00	.62	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.87	.00	.00	.00	.00	.00	.02
8	.00	.00	.00	.00	.00	.63	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.35	.62	.01	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.21	.62	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.30	.14	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.36	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.41	.47	.16	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.40	.56	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.52	.55	.54	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.02	.31	.54	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.21	.56	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.09	.54	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.51	.45	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.09	.58	5.3	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.15	.40	.54	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.55	.54	.00	.00	.00	.00	.00	.00
23	.00	.00	.08	.00	.66	.54	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.58	.54	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.65	.31	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.62	.39	.00	.00	.00	.00	.00	6.9
27	.00	.00	.00	.00	4.6	14	.19	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	19	.16	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.10	.00	---	.00	---	.00	---	.75	.00	---
TOTAL	0.00	0.00	0.18	1.66	31.49	261.52	0.51	0.00	0.01	0.80	0.00	8.34
MEAN	.000	.000	.006	.054	1.12	8.44	.017	.000	.000	.026	.000	.28
MAX	.00	.00	.10	.68	.19	218	.19	.00	.01	.75	.00	6.9
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.4	3.3	62	519	1.0	.00	.02	1.6	.00	17
CAL YR 1990	TOTAL	1.01	MEAN .003	MAX .38	MIN .00	AC-FT 2.0						
WTR YR 1991	TOTAL	304.51	MEAN .83	MAX 218	MIN .00	AC-FT 604						

e Estimated.

10259200 DEEP CREEK NEAR PALM DESERT, CA

LOCATION.--Lat 33°37'52", long 116°23'29", in NE 1/4 SE 1/4 sec.19, T.6 S., R.6 E., Riverside County, Hydrologic Unit 18100200, on left bank 500 ft downstream from unnamed tributary and 6.3 mi south of Palm Desert.

DRAINAGE AREA.--30.6 mi².

PERIOD OF RECORD.--May 1962 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--29 years, 2.17 ft³/s, 1,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,100 ft³/s, Sept. 10, 1976, gage height, 7.84 ft inside, 11.5 ft from floodmarks, from rating curve extended above 40 ft³/s on basis of slope-area measurement at gage heights 2.68, 5.15, and 7.84 ft; maximum gage height, 10.27 ft, Aug. 14, 1984; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft³/s and maximum (*), from rating curve extended above 40 ft³/s on basis of slope-area measurement at gage height 10.27 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0830	*2,230	*6.43	July 31	1115	2,090	6.27
Mar. 28	2045	26	2.67	Aug. 10	1615	532	4.28
July 8	1430	707	4.57				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e676	12	1.4	.24	.02	e.27	e.02
2	.00	.00	.00	.00	.00	e29	9.3	1.4	.29	.02	.12	e.02
3	.00	.00	.00	.00	.00	e11	8.8	1.2	.31	.02	.10	e.02
4	.00	.00	.00	.00	.00	e8.8	8.6	1.1	.30	.02	.08	e.02
5	.00	.00	.00	.00	.00	e7.6	9.3	.90	.29	.01	.08	e.02
6	.00	.00	.00	.00	.00	e6.8	11	.79	.29	.01	.08	e.02
7	.00	.00	.00	.00	.00	4.6	11	.80	.28	.01	.07	e.02
8	.00	.00	.00	.00	.00	3.6	8.3	.92	.23	e28	.07	e.02
9	.00	.00	.00	.00	.00	2.8	6.3	.95	.19	e.02	.08	e.02
10	.00	.00	.00	.00	.00	2.3	5.4	.92	.17	e.01	24	e.02
11	.00	.00	.00	.00	.00	2.0	5.6	.83	.15	e.00	e.90	e.02
12	.00	.00	.00	.00	.00	1.6	3.9	.64	.13	e.00	e.48	e.02
13	.00	.00	.00	.00	.00	1.5	2.7	.54	.10	e.00	e.02	e.02
14	.00	.00	.00	.00	.00	2.1	2.3	.51	.08	e.00	e.02	e.02
15	.00	.00	.00	.00	.00	1.5	2.2	.47	.07	e.00	e.02	e.02
16	.00	.00	.00	.00	.00	1.3	2.1	.45	.07	e.00	e.02	e.02
17	.00	.00	.00	.00	.00	1.1	1.9	.42	.07	e.00	e.02	e.02
18	.00	.00	.00	.00	.00	.92	1.8	.42	.06	e.00	e.02	e.02
19	.00	.00	.00	.00	.00	1.3	1.7	.40	.06	e.00	e.02	e.02
20	.00	.00	.00	.00	.00	2.4	1.7	.37	.06	.00	e.02	e.02
21	.00	.00	.00	.00	.00	2.8	1.7	.35	.06	.00	e.02	e.02
22	.00	.00	.00	.00	.00	2.6	1.7	.34	.05	.00	e.02	e.02
23	.00	.00	.00	.00	.00	2.8	1.6	.31	.04	.00	e.02	e.02
24	.00	.00	.00	.00	.00	2.8	1.5	.28	.04	.00	e.02	e.02
25	.00	.00	.00	.00	.00	3.1	1.5	.25	.04	.00	e.02	.01
26	.00	.00	.00	.00	.00	4.0	1.5	.23	.03	.00	e.02	.02
27	.00	.00	.00	.00	.00	12	1.6	.22	.03	.00	e.02	.02
28	.00	.00	.00	.00	215	14	1.5	.22	.03	.00	e.02	.01
29	.00	.00	.00	.00	---	15	1.5	.21	.02	.00	e.02	.01
30	.00	.00	.00	.00	---	14	1.4	.19	.02	.00	e.02	.01
31	.00	---	.00	.00	---	14	---	.21	---	e124	e.02	---
TOTAL	0.00	0.00	0.00	0.00	215.00	855.32	131.4	18.24	3.80	152.14	26.71	0.56
MEAN	.000	.000	.000	.000	7.68	27.6	4.38	.59	.13	4.91	.86	.019
MAX	.00	.00	.00	.00	215	676	12	1.4	.31	124	.24	.02
MIN	.00	.00	.00	.00	.00	.92	1.4	.19	.02	.00	.02	.01
AC-FT	.00	.00	.00	.00	426	1700	261	36	7.5	302	53	1.1

CAL YR 1990 TOTAL 3.22 MEAN .009 MAX .10 MIN .00 AC-FT 6.4
WTR YR 1991 TOTAL 1403.17 MEAN 3.84 MAX 676 MIN .00 AC-FT 2780

e Estimated.

10259300 WHITEWATER RIVER AT INDIO, CA

LOCATION.--Lat 33°44'14", long 116°14'07", in SE 1/4 NE 1/4 sec.15, T.5 S., R.7 E., Riverside County, Hydrologic Unit 18100200, on right bank of concrete drop structure, 1,000 ft upstream from Monroe Street bridge, and 1.7 mi northwest of Indio.

DRAINAGE AREA.--1,073 mi².

PERIOD OF RECORD.--March 1966 to current year.

REVISED RECORDS.--WDR CA-72-1: 1971.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Oct. 1, 1979. Elevation of gage is 0 ft National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1979, water-stage recorder at site 0.5 mi upstream at different datum. Oct. 1, 1979, to Feb. 17, 1983, at datum 1.03 ft lower.

REMARKS.--No estimated daily discharges. No regulation upstream from station. Water diverted from tributary streams for municipal supply in vicinity of Palm Springs. Water from the Colorado River basin is imported for ground-water recharge and irrigation.

AVERAGE DISCHARGE.--25 years, 2.85 ft³/s, 2,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s, Jan. 25, 1969, gage height, 14.41 ft, site and datum then in use, from rating curve extended above 1,300 ft³/s on basis of slope-area measurement at gage height 15.3 ft for flood of Nov. 22, 1965; no flow for all or most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2 or 3, 1938, reached a discharge of 29,000 ft³/s on basis of slope-area measurement, at site 5.0 mi upstream. Flood of Nov. 22, 1965, reached a stage of 15.3 ft, from floodmark, at site and datum used prior to Oct. 1, 1979, discharge 14,100 ft³/s on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*), from rating curve extended above 450 ft³/s on basis of critical-depth study:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1445	*2,300	*3.70

No flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	804	.00	.00	.00	.00	.36	.00
2	.00	.00	.00	.00	.00	87	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.78	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03
27	.00	.00	.00	.00	.00	34	.00	.00	.00	.00	.00	.35
28	.00	.00	.00	.00	.00	3.5	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	9.7	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	930.99	0.00	0.00	0.00	9.70	0.36	0.38
MEAN	.000	.000	.000	.000	.000	30.0	.000	.000	.000	.31	.012	.013
MAX	.00	.00	.00	.00	.00	804	.00	.00	.00	9.7	.36	.35
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	1850	.00	.00	.00	19	.7	.8

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 941.43 MEAN 2.58 MAX 804 MIN .00 AC-FT 1870[B

SALTON SEA BASIN

10259540 WHITEWATER RIVER NEAR MECCA, CA

LOCATION.--Lat 33°31'29", long 116°04'36", in NW 1/4 NW 1/4 sec.32, T.7 S., R.9 E., Riverside County, Hydrologic Unit 18100200, on left bank 1.6 mi upstream from mouth at Salton Sea and 3.3 mi south of Mecca.

DRAINAGE AREA.--1,495 mi².

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 221.00 ft below National Geodetic Vertical Datum of 1929 (levels by Coachella Valley Water District). Oct. 1, 1960, to Mar. 22, 1967, at site 1.3 mi downstream and Mar. 23, 1967, to July 22, 1970, at site 0.7 mi downstream at different datums.

REMARKS.--Records poor. Most flow represents seepage and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,500 ft³/s (estimated), Jan. 25, 1969; minimum daily, 37 ft³/s, Nov. 25-29, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,200 ft³/s (estimated), Mar. 1; minimum daily, 66 ft³/s, Dec. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	78	74	82	71	e1200	81	82	84	76	98	91
2	76	75	72	83	74	e500	79	79	86	76	89	89
3	73	73	69	85	79	126	83	82	79	78	89	93
4	74	86	68	93	78	110	80	82	80	78	88	86
5	77	85	68	85	78	121	81	84	85	80	85	91
6	81	68	66	83	78	116	84	88	82	84	82	101
7	82	69	68	83	82	98	83	86	81	90	81	90
8	82	70	68	84	76	97	83	87	75	86	90	85
9	80	71	69	79	81	100	78	85	73	85	85	81
10	82	71	68	82	81	101	86	84	73	81	88	76
11	85	70	69	80	83	97	88	86	78	85	94	75
12	85	74	70	72	82	96	82	88	82	82	100	74
13	77	74	73	76	83	95	80	89	79	84	108	73
14	73	73	70	75	84	92	81	82	76	85	102	78
15	75	70	73	75	81	95	82	80	78	86	101	77
16	77	73	72	72	83	91	80	e80	79	84	99	75
17	83	75	76	73	82	87	80	e80	76	85	102	75
18	80	76	73	74	83	88	81	e80	75	88	102	73
19	78	80	76	69	80	88	78	e80	73	86	103	75
20	74	76	74	73	82	90	80	e80	73	89	95	77
21	71	68	73	71	83	87	79	e80	72	87	99	76
22	69	71	76	73	86	80	78	e80	70	82	97	78
23	68	69	75	77	83	80	77	e80	73	79	99	76
24	69	74	81	79	87	79	76	e85	75	82	100	76
25	71	76	81	77	86	77	77	e85	70	81	102	74
26	70	76	77	74	84	75	77	e85	72	83	99	74
27	71	72	79	78	86	123	79	e85	74	89	95	75
28	71	70	82	74	118	111	80	e85	74	87	92	75
29	75	72	87	69	---	87	80	e85	78	86	93	73
30	72	73	80	67	---	85	79	e86	79	85	89	68
31	73	---	79	70	---	82	---	91	---	86	91	---
TOTAL	2348	2208	2286	2387	2314	4454	2412	2591	2304	2595	2937	2380
MEAN	75.7	73.6	73.7	77.0	82.6	144	80.4	83.6	76.8	83.7	94.7	79.3
MAX	85	86	87	93	118	1200	88	91	86	90	108	101
MIN	68	68	66	67	71	75	76	79	70	76	81	68
AC-FT	4660	4380	4530	4730	4590	8830	4780	5140	4570	5150	5830	4720

CAL YR 1990 TOTAL 30656 MEAN 84.0 MAX 142 MIN 66 AC-FT 60810
WTR YR 1991 TOTAL 31216 MEAN 85.5 MAX 1200 MIN 66 AC-FT 61920

e Estimated.

MOJAVE RIVER BASIN

67

10260500 DEEP CREEK NEAR HESPERIA, CA

LOCATION.--Lat 34°20'28", long 117°13'39", in NE 1/4 SE 1/4 sec.18, T.3 N., R.3 W., San Bernardino County, Hydrologic Unit 18090208, on right bank 0.5 mi upstream from confluence with West Fork Mojave River at Mojave River Forks Dam, 7 mi southeast of Hesperia, and 11 mi downstream from Lake Arrowhead.

DRAINAGE AREA.--134 mi².

PERIOD OF RECORD.--October 1904 to September 1922, October 1929 to current year. Prior to January 1930, monthly discharge only, published in WSP 1314.

REVISED RECORDS.--WSP 1314: 1931(M). WSP 1927: Drainage area.

GAGE.--Water-stage recorder. Broad-crested weir since December 1938. Elevation of gage is 3,050 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1314 for history of changes prior to Dec. 10, 1938.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Slight regulation by Lake Arrowhead, capacity, 48,000 acre-ft, used principally for recreation.

AVERAGE DISCHARGE.--80 years, 68.1 ft³/s, 49,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,600 ft³/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; maximum gage height, 23.81 ft, Feb. 10, 1978 (backwater from Mojave River Forks Reservoir); no flow July 17, 18, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0930	*8,900	*8.04	Apr. 6	0130	771	3.34

Minimum daily, 0.40 ft³/s, Sept. 11-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.57	.73	2.6	3.1	3.8	3980	282	102	14	3.8	e1.9	e.54
2	.61	.93	2.7	3.2	3.9	622	185	86	13	3.4	e1.7	e.52
3	.57	1.1	2.7	3.6	3.9	151	236	77	13	3.4	e1.6	e.50
4	.52	1.2	2.7	6.7	3.9	94	303	72	12	3.1	e1.6	e.48
5	.64	1.3	2.7	23	3.9	129	413	69	12	e3.2	e1.5	.44
6	e.60	1.4	2.7	23	4.3	108	484	70	11	e3.2	e1.4	.44
7	e.58	1.5	2.7	12	5.1	73	411	73	10	e3.0	e1.4	e.44
8	e.58	1.5	2.7	8.2	5.2	53	287	74	9.5	e3.0	e1.4	e.42
9	e.56	1.5	2.7	6.3	4.6	46	247	75	9.0	e2.8	e1.4	e.42
10	e.56	1.6	2.7	5.5	4.3	39	253	64	8.4	e2.8	e1.3	e.42
11	e.56	1.7	2.8	5.2	4.3	37	240	55	7.6	e2.8	e1.3	e.40
12	e.55	1.7	2.7	4.8	4.1	33	155	47	6.8	e2.8	e1.2	e.40
13	e.55	1.8	2.7	4.5	4.1	31	133	45	6.3	e2.6	e1.2	e.40
14	e.54	1.8	2.7	4.4	4.0	43	144	43	6.0	e2.6	e1.1	e.40
15	e.54	1.8	2.8	4.3	4.1	42	171	39	5.5	e2.6	e1.2	e.42
16	e.56	1.8	2.8	4.1	4.0	36	166	35	5.3	e2.6	e1.2	e.42
17	e.58	1.8	2.8	4.1	4.0	38	152	32	5.0	e2.5	e1.1	e.44
18	e.60	1.8	3.0	4.0	e4.0	36	145	30	4.9	e2.5	e1.0	e.44
19	e.60	1.8	3.0	3.9	e3.8	60	146	25	5.0	e2.5	e.96	e.44
20	e.60	2.2	3.0	3.9	e3.8	66	150	e24	4.9	e2.5	e.94	e.44
21	.95	2.0	3.0	3.9	e3.6	54	136	e24	4.6	e2.4	e.90	e.44
22	.78	3.1	3.0	3.9	e3.6	64	137	e22	4.5	e2.3	e.84	e.45
23	.62	2.9	2.9	4.1	e3.5	77	135	22	4.4	e2.2	e.78	e.45
24	.62	2.5	2.9	4.0	e3.5	90	147	20	4.5	e2.1	e.74	e.46
25	.62	2.3	3.0	3.9	e3.5	100	139	19	4.5	e2.1	e.70	e.47
26	.58	2.4	3.0	3.9	e3.5	86	124	19	4.3	e2.1	e.68	e.47
27	.65	2.5	3.1	3.9	e3.4	81	119	15	4.3	e2.0	e.66	e.48
28	.65	3.1	3.1	3.9	897	83	117	15	4.3	e1.9	e.64	e.49
29	.66	2.8	3.2	3.9	---	132	103	15	4.2	e1.9	e.60	e.50
30	.67	2.6	3.2	3.8	---	177	101	14	4.0	e1.9	e.60	e.54
31	.66	---	3.1	3.8	---	248	---	15	---	e1.9	e.58	---
TOTAL	18.93	57.16	88.7	180.8	1004.7	6909	5961	1337	212.8	80.5	34.12	13.57
MEAN	.61	1.91	2.86	5.83	35.9	223	199	43.1	7.09	2.60	1.10	.45
MAX	.95	3.1	3.2	23	897	3980	484	102	14	3.8	1.9	.54
MIN	.52	.73	2.6	3.1	3.4	31	101	14	4.0	1.9	.58	.40
AC-FT	38	113	176	359	1990	13700	11820	2650	422	160	68	27

CAL YR 1990 TOTAL 3138.49 MEAN 8.60 MAX 71 MIN .10 AC-FT 6230
WTR YR 1991 TOTAL 15898.28 MEAN 43.6 MAX 3980 MIN .40 AC-FT 31530

e Estimated.

10260620 HOUSTON CREEK ABOVE LAKE GREGORY, AT CRESTLINE, CA

LOCATION.--Lat 34°14'33", long 117°16'48", in NE 1/4 SE 1/4 sec.22, T.2 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank 0.1 mi east of Wildrose Road, 0.1 mi southeast of intersection of Lake Gregory and Wildrose Roads, and 0.3 mi east of Crestline.

DRAINAGE AREA.--0.35 mi².

PERIOD OF RECORD.--March 1979 to current year.

REVISED RECORDS.--WDR CA-82-1: 1980-81(M).

GAGE.--Water-stage recorder. Elevation of gage is 4,540 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation upstream from station.

AVERAGE DISCHARGE.--12 years, 0.58 ft³/s, 420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 295 ft³/s, Feb. 19, 1980, gage height, 7.40 ft, from rating curve extended above 70 ft³/s on basis of slope-conveyance study at gage height 7.40 ft; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0430	*69	*6.26				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	21	2.3	.16	.11	.04	.01	.00
2	.00	.00	.00	.00	.01	1.5	2.2	.25	.11	.03	.01	.00
3	.00	.00	.00	1.0	.01	.54	2.6	.28	.11	.03	.01	.00
4	.00	.00	.00	1.6	.01	.83	2.6	.24	.11	.02	.01	.00
5	.00	.01	.00	.25	.16	.61	2.9	.22	.11	.02	.01	.01
6	.00	.02	.00	.00	.00	.08	2.3	.22	.10	.01	.01	.00
7	.00	.00	.00	.00	.00	.07	1.6	.20	.09	.02	.01	.00
8	.00	.00	.00	.00	.00	.07	1.1	.14	.07	.02	.01	.00
9	.00	.02	.01	.08	.00	.07	.86	.14	.06	.02	.01	.00
10	.00	.02	.00	.00	.00	.06	.75	.13	.06	.02	.01	.00
11	.00	.01	.01	.00	.00	.13	.56	.12	.05	.02	.01	.00
12	.00	.00	.03	.00	.00	.05	.50	.12	.05	.02	.01	.00
13	.00	.00	.05	.00	.00	2.4	.43	.12	.05	.01	.01	.00
14	.00	.00	.06	.00	.00	.39	.43	.12	.05	.01	.02	.00
15	.00	.00	.07	.00	.00	.17	.38	.12	.04	.01	.01	.00
16	.00	.00	.00	.00	.00	.38	.35	.12	.05	.01	.01	.00
17	.00	.00	.01	.00	.00	.29	.35	.12	.05	.01	.01	.00
18	.00	.00	.00	.00	.00	.25	.35	.12	.05	.02	.01	.00
19	.02	.14	.02	.00	.00	.59	.35	.13	.05	.02	.01	.00
20	.00	1.1	.02	.00	.00	.42	.31	.14	.05	.02	.01	.00
21	.00	.01	.02	.00	.00	.34	.31	.15	.05	.02	.01	.00
22	.00	.01	.01	.00	.00	.69	.28	.15	.05	.02	.00	.00
23	.00	.01	.01	.00	.00	1.2	.26	.12	.05	.02	.00	.00
24	.00	.01	.03	.00	.00	.98	.25	.12	.05	.02	.00	.00
25	.00	.01	.01	.00	.00	.79	.26	.12	.05	.02	.00	.00
26	.00	.18	.00	.00	.00	.44	.25	.11	.05	.02	.00	.00
27	.00	.00	.00	.00	4.3	.37	.20	.11	.07	.02	.01	.00
28	.00	.01	.00	.00	14	1.4	.18	.10	.06	.02	.00	.00
29	.00	.01	.00	.00	---	1.7	.17	.09	.05	.02	.01	.00
30	.00	.01	.00	.00	---	2.1	.16	.11	.05	.02	.00	.00
31	.00	---	.00	.00	---	2.7	---	.11	---	.02	.00	---
TOTAL	0.02	1.58	0.36	2.93	18.49	42.61	25.54	4.50	1.95	0.60	0.24	0.01
MEAN	.001	.053	.012	.095	.66	1.37	.85	.15	.065	.019	.008	.000
MAX	.02	1.1	.07	1.6	14	21	2.9	.28	.11	.04	.02	.01
MIN	.00	.00	.00	.00	.00	.05	.16	.09	.04	.01	.00	.00
AC-FT	.04	3.1	.7	5.8	37	85	51	8.9	3.9	1.2	.5	.02

CAL YR 1990	TOTAL 56.17	MEAN .15	MAX 7.5	MIN .00	AC-FT 111
WTR YR 1991	TOTAL 98.83	MEAN .27	MAX 21	MIN .00	AC-FT 196

10260630 ABONDIGAS CREEK ABOVE LAKE GREGORY, AT CRESTLINE, CA

LOCATION.--Lat 34°14'16", long 117°15'51", in SW 1/4 SE 1/4 sec.23, T.2 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on right bank 400 ft south of east gate for San Moritz Park and 1.4 mi east of Crestline.

DRAINAGE AREA.--1.15 mi².

PERIOD OF RECORD.--March 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,540 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1983, at site 200 ft upstream at datum 5.78 ft higher.

REMARKS.--Records poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--12 years, 1.01 ft³/s, 732 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 580 ft³/s, Feb. 27, 1983, gage height, 6.32 ft, site and datum then in use, from rating curve extended above 94 ft³/s on basis of field estimate of peak flow; maximum gage height, 8.35 ft, Feb. 28, 1991; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 28	0200	*83	*8.35				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.05	.00	24	2.3	.54	.15	.03	.00	.00
2	.00	.00	.00	.00	.00	4.5	2.0	.54	.15	.00	.00	.00
3	.00	.00	.00	.81	.00	1.2	2.7	.54	.15	.00	.00	.00
4	.00	.00	.00	2.2	.03	.74	2.8	.47	.13	.00	.00	.00
5	.00	.00	.00	.80	.02	1.2	3.1	.39	.12	.00	.00	.00
6	.00	.00	.00	.26	.00	.49	3.4	.30	.12	.00	.00	.00
7	.00	.00	.00	.16	.00	.52	2.8	.32	.12	.00	.00	.00
8	.00	.00	.00	.17	.00	.54	1.4	.29	e.12	.00	.00	.00
9	.00	.00	.00	.27	.00	.48	2.2	.18	e.10	.00	.00	.00
10	.00	.00	.00	.17	.00	.44	2.2	.18	e.09	.00	.00	.00
11	.00	.00	.00	.12	.00	.61	2.1	.20	e.08	.00	.00	.00
12	.00	.00	.00	.11	.00	.57	1.2	.26	.06	.00	.00	.00
13	.00	.00	.00	.11	.00	1.6	1.1	.35	.06	.00	.00	.00
14	.00	.00	.00	.12	.00	1.2	1.1	.29	.04	.00	.00	.00
15	.00	.00	.00	.10	.00	1.1	1.1	.29	.03	.00	.00	.00
16	.00	.00	.00	.15	.00	.95	1.1	.28	.03	.00	.00	.00
17	.00	.00	.00	.16	.00	1.2	.95	.28	.03	.00	.00	.00
18	.00	.00	.00	.14	.00	1.4	.82	.29	.04	.00	.00	.00
19	.00	.01	.00	.18	.00	2.0	1.0	.27	.03	.00	.00	.00
20	.00	.29	.00	.25	.00	1.4	1.0	.25	.04	.00	.00	.00
21	.00	.00	.00	.22	.00	1.4	.88	.25	.02	.00	.00	.00
22	.00	.00	.00	.15	.00	1.6	.82	.25	.01	.00	.00	.00
23	.00	.00	.00	.14	.00	1.8	.76	.24	.01	.00	.00	.00
24	.00	.00	.00	.13	.00	2.3	.59	.25	.01	.00	.00	.00
25	.00	.00	.00	.12	.00	2.4	.76	.24	.01	.00	.00	.00
26	.00	.03	.00	.10	.00	2.1	.54	.24	.01	.00	.00	.00
27	.00	.00	.00	.07	2.4	7.0	.54	.21	.01	.00	.00	.00
28	.00	.00	.00	.04	16	2.4	.64	.18	.01	.00	.00	.00
29	.00	.00	.00	.00	---	2.1	.54	.19	.04	.00	.00	.00
30	.00	.00	.00	.00	---	1.8	.54	.17	.03	.00	.00	.00
31	.00	---	.00	.00	---	2.1	---	.17	---	.00	.00	---
TOTAL	0.00	0.33	0.00	7.30	18.45	73.14	42.98	8.90	1.85	0.03	0.00	0.00
MEAN	.000	.011	.000	.24	.66	2.36	1.43	.29	.062	.001	.000	.000
MAX	.00	.29	.00	2.2	16	24	3.4	.54	.15	.03	.00	.00
MIN	.00	.00	.00	.00	.00	.44	.54	.17	.01	.00	.00	.00
AC-FT	.00	.7	.00	14	37	145	85	18	3.7	.06	.00	.00

CAL YR 1990 TOTAL 70.54 MEAN .19 MAX 5.2 MIN .00 AC-FT 140
WTR YR 1991 TOTAL 152.98 MEAN .42 MAX 24 MIN .00 AC-FT 303

e Estimated.

MOJAVE RIVER BASIN

10260640 LAKE GREGORY AT CRESTLINE, CA

LOCATION.--Lat 34°14'35", long 117°16'22", in NW 1/4 SW 1/4 sec.23, T.2 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, in boathouse on north side of Lake Gregory, 0.8 mi east of Lake Gregory Drive, and 0.9 mi east of Crestline.

DRAINAGE AREA.--2.66 mi².

PERIOD OF RECORD.--August 1978 to current year. Records for September 1966 through November 1971 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is 0.00 ft, based on map from land survey of 1892; approximately 7 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by earth-type dam. Dam was completed to a height of 90 ft in 1938. Capacity is 2,070 acre-ft below spillway elevation, 4,517.0 ft. Water is released from lake to Houston Creek for water supply and recreational use in Silverwood Lake, 4.5 mi downstream. Spillway elevation is raised by addition of flashboards to accommodate summer recreational use.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents recorded, 2,360 acre-ft, Jan. 29, 1980, elevation, 4,520.33 ft; minimum, 1,900 acre-ft, several days during 1991, elevation, 4,515.02 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents recorded, 2,310 acre-ft, Mar. 1, elevation, 4,519.81 ft; minimum, 1,900 acre-ft, several days, elevation, 4,515.02 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on surveys by California Department of Water Resources in 1892 and 1936)

4,505	1,200	4,520	2,330
4,510	1,520	4,525	2,850
4,515	1,900		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1960	1920	1920	1900	1960	2290	2120	2280	2270	2240	2190	2140
2	1960	1920	1920	1900	1960	2260	2140	2280	2270	2240	2190	2130
3	1960	1920	1920	1930	1960	2260	2160	2280	2270	2240	2190	2130
4	1960	1920	1910	1950	1960	2270	2180	2280	2270	2230	2190	2130
5	1960	1920	1910	1960	1970	2280	2210	2280	2270	2230	2180	2130
6	1960	1910	1910	1960	1970	2270	2230	2280	2270	2230	2180	2130
7	1950	1910	1910	1960	1970	2260	2240	2280	2270	2230	2180	2130
8	1950	1910	1910	1960	1970	2190	2260	2280	2260	2230	2180	2130
9	1950	1910	1910	1960	1970	2160	2270	2280	2260	2230	2180	2120
10	1950	1910	1910	1970	1970	2150	2280	2280	2260	2230	2180	2110
11	1950	1910	1910	1970	1970	2110	2280	2280	2260	2220	2170	2100
12	1950	1910	1910	1970	1970	2100	2280	2280	2260	2220	2170	2100
13	1940	1910	1910	1970	1970	2120	2280	2280	2260	2220	2170	2090
14	1940	1910	1910	1970	1970	2100	2280	2280	2260	2220	2170	2090
15	1940	1900	1910	1970	1970	2100	2280	2280	2260	2220	2170	2090
16	1940	1900	1910	1970	1970	2100	2280	2280	2250	2210	2170	2090
17	1940	1900	1910	1960	1960	2090	2280	2280	2250	2210	2170	2080
18	1940	1900	1910	1960	1960	2090	2280	2270	2250	2210	2160	2080
19	1940	1910	1910	1960	1960	2100	2280	2270	2250	2210	2160	2080
20	1940	1920	1910	1960	1960	2110	2280	2270	2250	2210	2160	2080
21	1940	1920	1910	1960	1960	2100	2280	2270	2250	2210	2160	2080
22	1930	1920	1910	1960	1960	2100	2280	2270	2250	2210	2160	2080
23	1930	1920	1910	1960	1960	2100	2280	2270	2240	2200	2150	2080
24	1930	1920	1910	1960	1960	2100	2280	2270	2240	2200	2150	2070
25	1930	1920	1900	1960	1960	2100	2280	2270	2240	2200	2150	2070
26	1930	1920	1900	1960	1960	2120	2280	2270	2240	2200	2150	2070
27	1930	1920	1900	1960	2010	2110	2280	2270	2240	2200	2150	2070
28	1930	1920	1900	1960	2180	2110	2280	2270	2240	2200	2140	2070
29	1930	1920	1900	1960	---	2110	2280	2270	2240	2190	2140	2070
30	1930	1920	1900	1960	---	2110	2280	2270	2240	2190	2140	2070
31	1920	---	1900	1960	---	2110	---	2270	---	2190	2140	---
MAX	1960	1920	1920	1970	2180	2290	2280	2280	2270	2240	2190	2140
MIN	1920	1900	1900	1900	1960	2090	2120	2270	2240	2190	2140	2070
a	4,515.26	4,515.16	4,515.04	4,515.70	4,518.19	4,517.41	4,519.43	4,519.32	4,518.97	4,518.40	4,517.73	4,516.93
b	-40	0	-20	+60	+220	-70	+170	-10	-30	-50	-50	-70

CAL YR 1990 MAX 2170 MIN 1900 b -140
WTR YR 1991 MAX 2290 MIN 1900 b +110

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10260650 HOUSTON CREEK BELOW LAKE GREGORY, AT CRESTLINE, CA

LOCATION.--Lat 34°14'54", Long 117°16'05", in NE 1/4 NW 1/4 sec.23, T.2 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank of channel on Camp Switzerland campgrounds, 0.2 mi downstream from Lake Gregory spillway, 0.5 mi east of the intersection of Lake Gregory Road and Lake Gregory Drive, and 1.2 mi northeast of Crestline.

DRAINAGE AREA.--2.68 mi².

PERIOD OF RECORD.--March 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Lake Gregory (station 10260640) 0.2 mi upstream, usable capacity, 2,070 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 570 ft³/s, Jan. 29, 1980, gage height, 7.31 ft, from rating curve extended above 180 ft³/s on basis of velocity-area study of peak flow; no flow for several days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 191 ft³/s, Mar. 8, gage height, 6.86 ft; minimum daily, 0.02 ft³/s, Dec. 23, 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.04	.04	.04	.06	45	4.7	1.6	.12	.06	.05	.03
2	.03	.04	.04	.04	.05	15	.37	.84	.13	.06	.05	.03
3	.04	.04	.04	.17	.05	3.8	.38	.37	.14	.07	.05	.03
4	.03	.04	.03	.23	.05	.37	.38	.40	.14	.06	.05	.03
5	.04	.04	.03	.15	.06	.89	.37	.42	.13	.07	.05	.03
6	.04	.03	.03	.10	.05	2.9	.29	.49	.12	.07	.05	.03
7	.05	.04	.03	.10	.05	4.5	.28	.52	.10	.07	.05	.03
8	.05	.04	.04	.09	.05	42	.25	.79	.10	.07	.05	.03
9	.05	.04	.04	.10	.05	14	.26	.50	.08	.07	.05	.03
10	.04	.04	.04	.09	.05	5.2	.53	.40	.08	.06	.05	2.6
11	.04	.05	.04	.09	.05	17	1.7	.59	.09	.06	.05	3.7
12	.04	.04	.03	.09	.04	7.4	2.6	.99	.09	.06	.05	1.6
13	.04	.04	.03	.08	.04	6.6	2.7	2.2	.09	.06	.05	.86
14	.04	.03	.03	.07	.04	7.9	3.6	.49	.08	.06	.05	.54
15	.04	.04	.03	.07	.04	5.5	3.3	.43	.08	.06	.05	.33
16	.04	.04	.04	.08	.04	4.1	3.2	2.0	.08	.06	.05	.26
17	.04	.04	.03	.09	.05	3.2	2.1	1.9	.08	.05	.05	.12
18	.03	.04	.03	.09	.05	2.3	1.9	1.3	.08	.05	.04	.07
19	.04	.05	.03	.09	.05	6.9	2.5	.80	.08	.05	.03	.05
20	.05	.14	.04	.08	.05	7.5	2.2	.73	.08	.05	.04	.04
21	.04	.04	.04	.07	.04	5.8	1.9	.23	.05	.05	.04	.03
22	.03	.04	.03	.07	.04	4.6	1.8	.09	.04	.05	.04	.03
23	.03	.04	.02	.07	.04	5.1	1.7	.17	.05	.05	.04	.03
24	.03	.03	.02	.07	.04	5.3	1.9	.45	.06	.05	.04	.03
25	.03	.04	.03	.07	.04	7.5	1.8	.22	.06	.05	.04	.03
26	.03	.06	.04	.06	.04	7.9	1.4	.72	.06	.05	.04	.03
27	.03	.05	.04	.06	.54	14	1.3	.11	.07	.05	.04	.03
28	.03	.05	.04	.06	4.8	6.8	1.1	.13	.08	.05	.03	.03
29	.03	.05	.04	.06	---	6.0	1.3	.21	.08	.04	.03	.03
30	.03	.04	.04	.06	---	6.5	1.1	.28	.07	.05	.03	.03
31	.03	---	.04	.06	---	7.6	---	.14	---	.05	.03	---
TOTAL	1.14	1.34	1.07	2.65	6.55	279.16	48.91	20.51	2.59	1.76	1.36	10.74
MEAN	.037	.045	.035	.085	.23	9.01	1.63	.66	.086	.057	.044	.36
MAX	.05	.14	.04	.23	4.8	45	4.7	2.2	.14	.07	.05	3.7
MIN	.03	.03	.02	.04	.04	.37	.25	.09	.04	.04	.03	.03
AC-FT	2.3	2.7	2.1	5.3	13	554	97	41	5.1	3.5	2.7	21

CAL YR 1990 TOTAL 222.41 MEAN .61 MAX 28 MIN .01 AC-FT 441
WTR YR 1991 TOTAL 377.78 MEAN 1.04 MAX 45 MIN .02 AC-FT 749

MOJAVE RIVER BASIN

10261000 WEST FORK MOJAVE RIVER NEAR HESPERIA, CA

LOCATION.--Lat 34°20'20", long 117°15'25", in NW 1/4 NW 1/4 sec.24, T.3 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank on upstream wingwall of concrete double box culvert on Arrowhead Lake Road, 0.1 mi northeast of junction with Highway 174, 4.5 mi downstream from Cedar Springs Dam on Silverwood Lake, and 6.5 mi southeast of Hesperia.

DRAINAGE AREA.--70.3 mi².

PERIOD OF RECORD.--October 1904 to September 1922, October 1929 to September 1971, October 1974 to current year.

REVISED RECORDS.--WSP 1564: 1930(M), 1932, 1938. WSP 1927: Drainage area. WDR CA-84-1: 1983.

GAGE.--Water-stage recorder. Elevation of gage is 3,040 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 30, 1922, nonrecording gage or water-stage recorder 1.6 mi downstream at different datum. June 30, 1922, to September 1971, water-stage recorder 1.5 mi downstream at different datum.

REMARKS.--Records good. Since 1972 regulated by Silverwood Lake (holding basin for imported water), total capacity, 78,000 acre-ft, 4.5 mi upstream, which releases all natural inflow as soon as possible after a storm.

AVERAGE DISCHARGE.--60 years (water years 1905-22, 1930-71), 39.4 ft³/s, 28,550 acre-ft/yr; 17 years (water years 1975-91), 38.1 ft³/s, 27,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,100 ft³/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft³/s, Mar. 1, gage height, 5.10 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	501	69	8.2	4.9	e20	.00	.00
2	.00	.00	.00	.00	.00	28	58	8.1	4.4	e20	.00	.00
3	.00	.00	.00	.00	.00	8.0	42	7.8	5.1	e22	.00	.00
4	.00	.00	.00	.00	.00	4.9	19	7.5	4.3	e25	.00	.00
5	.00	.00	.00	.00	.00	3.9	16	7.3	3.4	e25	.00	.00
6	.00	.00	.00	.00	.00	3.8	15	6.9	3.6	24	.00	.00
7	.00	.00	.00	.00	.00	5.9	14	6.6	3.7	24	.00	.00
8	.00	.00	.00	.00	.00	22	8.7	6.3	3.4	6.6	.00	.00
9	.00	.00	.00	.00	.00	22	10	6.1	3.1	.83	.00	.00
10	.00	.00	.00	.00	.00	18	11	7.5	3.1	.00	.00	.00
11	.00	.00	.00	.00	.00	13	11	12	5.9	.00	.00	.00
12	.00	.00	.00	.00	.00	3.9	14	15	21	.00	.00	.00
13	.00	.00	.00	.00	.00	14	11	15	4.8	.00	.00	.00
14	.00	.00	.00	.00	.00	13	9.4	8.2	3.0	.00	.00	.00
15	.00	.00	.00	.00	.00	1.5	9.1	7.4	2.1	.00	.00	.00
16	.00	.00	.00	.00	.00	2.0	9.0	7.2	.85	.00	.00	.00
17	.00	.00	.00	.00	.00	2.9	14	6.8	17	.00	.00	.00
18	.00	.00	.00	.00	.00	2.5	40	6.9	73	.00	.00	.00
19	.00	.00	.00	.00	.00	7.4	41	6.6	79	.00	.00	.00
20	.00	.00	.00	.00	.00	13	41	5.6	81	.00	.00	.00
21	.00	.00	.00	.00	.00	8.4	42	5.1	61	.00	.00	.00
22	.00	.00	.00	.00	.00	11	42	5.4	27	.00	.00	.00
23	.00	.00	.00	.00	.00	14	42	5.5	29	.00	.00	.00
24	.00	.00	.00	.00	.00	11	31	5.5	31	.00	.00	.00
25	.00	.00	.00	.00	.00	17	11	5.2	33	.00	.00	.00
26	.00	.00	.00	.00	.00	21	9.1	5.1	38	.00	.00	.00
27	.00	.00	.00	.00	.00	309	8.8	5.4	29	.00	.00	.00
28	.00	.00	.00	.00	73	48	8.7	5.4	12	.00	.00	.00
29	.00	.00	.00	.00	---	43	8.6	4.4	35	.00	.00	.00
30	.00	.00	.00	.00	---	48	8.2	5.1	e18	.00	.00	.00
31	.00	---	.00	.00	---	59	---	5.5	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	73.00	1280.1	673.6	220.6	639.65	167.43	0.00	0.00
MEAN	.000	.000	.000	.000	2.61	41.3	22.5	7.12	21.3	5.40	.000	.000
MAX	.00	.00	.00	.00	73	501	69	15	81	25	.00	.00
MIN	.00	.00	.00	.00	.00	1.5	8.2	4.4	.85	.00	.00	.00
AC-FT	.00	.00	.00	.00	145	2540	1340	438	1270	332	.00	.00

CAL YR 1990 TOTAL 690.64 MEAN 1.89 MAX 64 MIN .00 AC-FT 1370
WTR YR 1991 TOTAL 3054.38 MEAN 8.37 MAX 501 MIN .00 AC-FT 6060

e Estimated.

10261100 MOJAVE RIVER BELOW MOJAVE RIVER FORKS RESERVOIR, NEAR HESPERIA, CA

LOCATION.--Lat 34°21'17", long 117°14'40", in NE 1/4 NE 1/4 sec.13, T.3 N., R.4/W., San Bernardino County, Hydrologic Unit 18090208, on left bank 0.8 mi downstream from Mojave River Forks Reservoir, 6.2 mi downstream from Silverwood Lake on West Fork Mojave River, 6.5 mi southeast of Hesperia, and 12.2 mi downstream from Lake Arrowhead on Deep Creek (head of Mojave River).

DRAINAGE AREA.--211 mi².

PERIOD OF RECORD.--October 1971 to September 1974, October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,000 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1971 to September 1974, water-stage recorder at site 0.8 mi upstream on reservoir outlet channel at different datum.

REMARKS.--Records fair above 100 ft³/s, and poor below. Flow partially regulated by Lake Arrowhead, capacity, 48,000 acre-ft, used principally for recreation; Silverwood Lake, capacity, 78,000 acre-ft, used for the storage and distribution of imported water and recreation; and Mojave River Forks Reservoir, capacity, 89,700 acre-ft, used for flood control. Silverwood Reservoir releases all natural inflow to the West Fork Mojave River as soon as possible after a storm. Sewage effluent from Lake Arrowhead area is released above gage at times.

AVERAGE DISCHARGE.--14 years (water years 1972-74, 1981-91), 60.9 ft³/s, 44,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 11,700 ft³/s, Mar. 2, 1983, on basis of flood routing; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,760 ft³/s, Mar. 1, gage height, 5.33 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	2660	376	112	e2.5	32	.00	.00
2	.00	.00	.00	.00	.00	501	242	95	e1.7	33	.00	.00
3	.00	.00	.00	.00	.00	129	289	78	e1.0	32	.00	.00
4	.00	.00	.00	.00	.00	71	352	71	e.00	28	.00	.00
5	.00	.00	.00	.00	.00	76	426	68	e.00	27	.00	.00
6	.00	.00	.00	.00	.00	94	483	68	e.00	25	.00	.00
7	.00	.00	.00	.00	.00	62	430	71	e.00	26	.00	.00
8	.00	.00	.00	.00	.00	68	316	73	e.00	e10	.00	.00
9	.00	.00	.00	.00	.00	75	288	74	e.00	e1.0	.00	.00
10	.00	.00	.00	.00	.00	73	312	63	e.00	.00	.00	.00
11	.00	.00	.00	.00	.00	71	309	62	e.00	.00	.00	.00
12	.00	.00	.00	.00	.00	36	215	58	20	.00	.00	.00
13	.00	.00	.00	.00	.00	61	187	55	e1.0	.00	.00	.00
14	.00	.00	.00	.00	.00	80	190	40	e.00	.00	.00	.00
15	.00	.00	.00	.00	.00	53	212	31	e.00	.00	.00	.00
16	.00	.00	.00	.00	.00	43	207	28	e.00	.00	.00	.00
17	.00	.00	.00	.00	.00	36	199	26	e4.0	.00	.00	.00
18	.00	.00	.00	.00	.00	34	226	25	78	.00	.00	.00
19	.00	.00	.00	.00	.00	67	224	23	96	.00	.00	.00
20	.00	.00	.00	.00	.00	95	226	21	99	.00	.00	.00
21	.00	.00	.00	.00	.00	81	210	17	86	.00	.00	.00
22	.00	.00	.00	.00	.00	73	210	15	35	.00	.00	.00
23	.00	.00	.00	.00	.00	92	208	13	34	.00	.00	.00
24	.00	.00	.00	.00	.00	116	212	12	37	.00	.00	.00
25	.00	.00	.00	.00	.00	130	173	12	36	.00	.00	.00
26	.00	.00	.00	.00	.00	121	149	11	44	.00	.00	.00
27	.00	.00	.00	.00	.00	525	138	e10	42	.00	.00	.00
28	.00	.00	.00	.00	365	173	137	e8.0	23	.00	.00	.00
29	.00	.00	.00	.00	---	214	118	e6.5	39	.00	.00	.00
30	.00	.00	.00	.00	---	245	110	e5.0	30	.00	.00	.00
31	.00	---	.00	.00	---	353	---	e3.5	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	365.00	6508	7374	1255.0	709.20	214.00	0.00	0.00
MEAN	.000	.000	.000	.000	13.0	210	246	40.5	23.6	6.90	.000	.000
MAX	.00	.00	.00	.00	365	2660	483	112	99	33	.00	.00
MIN	.00	.00	.00	.00	.00	34	110	3.5	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	724	12910	14630	2490	1410	424	.00	.00

CAL YR 1990 TOTAL 2680.77 MEAN 7.34 MAX 104 MIN .00 AC-FT 5320
WTR YR 1991 TOTAL 16425.20 MEAN 45.0 MAX 2660 MIN .00 AC-FT 32580

e Estimated.

MOJAVE RIVER BASIN

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA

LOCATION.--Lat 34°34'23", long 117°19'11", in SW 1/4 SE 1/4 sec.29, T.6 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank 650 ft upstream from bridge on county road (formerly U.S. Highway 66), 0.6 mi downstream from Atchison, Topeka, & Santa Fe Railway bridge, 3 mi northwest of Victorville, 17.8 mi downstream from Mojave River Forks Reservoir, 24 mi downstream from Silverwood Lake on the West Fork Mojave River, and 30 mi downstream from Lake Arrowhead on Deep Creek (East Fork Mojave River).

DRAINAGE AREA.--513 mi².

PERIOD OF RECORD.--February 1899 to September 1906, October 1930 to current year. Monthly discharge only for January to September 1906, October, November 1930, published in WSP 1314. Prior to October 1936, published as "at Victorville" and as "near Victorville" in 1937.

REVISED RECORDS.--WSP 1927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,643.01 ft above National Geodetic Vertical Datum of 1929. See WSP 1314 for history of gage changes prior to Mar. 28, 1938. Mar. 28, 1938, to Apr. 14, 1966, at site 350 ft upstream at datum 5.00 ft higher; Apr. 15, 1966, to July 17, 1969, at site 350 ft upstream at datum 3.00 ft higher.

REMARKS.--Records poor. Regulation by Lake Arrowhead, capacity, 48,000 acre-ft used principally for recreation, since 1922; Silverwood Lake, capacity, 78,000 acre-ft used for storage and distribution of imported water and recreation, since 1971; and Mojave River Forks Reservoir, capacity, 89,700 acre-ft, since 1971. Diversions and pumping for irrigation and for Mojave State Fish Hatchery upstream from station.

AVERAGE DISCHARGE.--68 years (water years 1900-06, 1931-91), 74.3 ft³/s, 53,830 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,600 ft³/s, Mar. 2, 1938, gage height, 23.7 ft, present datum, from rating curve extended above 10,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 1.6 ft³/s, July 25 to Aug. 5, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 894 ft³/s, Mar. 1, gage height, 5.59 ft; minimum daily, 1.9 ft³/s, Aug. 31, Sept. 1-3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.0	e11	e14	e15	18	206	e34	e19	e12	e8.0	3.6	1.9
2	e5.0	e11	e14	e24	17	221	e32	e19	e12	e8.0	3.9	1.9
3	e5.0	e11	e14	e26	17	35	e29	e18	e11	e7.5	4.0	1.9
4	e5.0	e11	e14	e35	17	e26	e28	e18	e11	e7.5	3.7	2.1
5	e5.0	e12	e14	e30	16	e24	e27	e18	e11	e7.0	3.7	2.0
6	e4.9	e12	e14	e25	16	e23	e26	e17	e11	e7.0	4.2	2.2
7	e4.8	e12	e14	e23	16	e21	e26	e17	e11	e7.0	e4.5	2.3
8	e4.8	e13	e14	e22	16	e20	e26	e17	e11	e6.5	e3.6	2.1
9	e4.7	e13	e14	e21	16	e19	e25	e17	e11	6.3	e3.8	2.0
10	e4.7	e13	e15	e21	15	e18	e25	e16	e10	7.9	e3.2	2.2
11	e4.9	e13	e15	e21	14	e18	e25	e16	e10	7.5	e3.2	2.1
12	e5.9	e13	e16	e21	14	e18	e25	e16	e10	6.3	e3.0	2.1
13	e5.9	e13	e16	e22	14	e17	e25	e16	e9.5	5.0	e3.2	2.1
14	e6.0	e14	e16	e21	15	e17	e25	e16	e9.0	5.1	e3.0	2.1
15	e7.0	e14	e16	e22	15	e17	e25	e16	e9.0	4.4	e3.2	2.2
16	e7.5	e14	e16	e22	15	e17	e24	e16	e8.5	4.3	e3.2	2.2
17	e8.5	e14	e16	e22	15	e16	e24	e16	e8.5	4.1	3.1	2.3
18	e8.6	e15	e16	e22	15	e16	e23	e16	e8.5	4.1	2.5	2.4
19	e8.7	e15	e16	e22	14	e20	e23	e16	e8.5	4.3	2.3	2.7
20	e8.8	e16	e16	23	13	e45	e23	e15	e8.5	4.1	2.2	2.4
21	e9.0	e13	e16	22	13	e25	e23	e15	e8.5	4.1	2.0	2.7
22	e10	e15	e16	24	13	e18	e23	e15	e8.5	4.1	2.1	3.1
23	e10	e16	e16	25	13	e17	e22	e14	e8.5	4.2	2.5	3.1
24	e10	e16	e15	25	13	e16	e22	e14	e8.5	4.2	2.2	3.1
25	e10	e30	e15	25	12	e15	e21	e14	e9.0	4.3	2.2	3.2
26	e10	e20	e16	25	12	e50	e20	e13	e9.0	4.0	2.2	3.0
27	e10	e16	e16	22	13	e150	e20	e12	e8.5	3.6	2.1	2.8
28	e10	e15	e15	22	113	e100	e19	e13	e8.5	4.0	2.2	2.5
29	e11	e14	e14	20	---	e80	e19	e12	e8.5	3.5	2.1	2.9
30	e11	e14	e14	18	---	e40	e19	e12	e8.0	3.0	2.0	3.1
31	e11	---	e14	18	---	e35	---	e12	---	3.0	1.9	---
TOTAL	232.7	429	467	706	510	1360	728	481	286.5	163.9	90.6	72.7
MEAN	7.51	14.3	15.1	22.8	18.2	43.9	24.3	15.5	9.55	5.29	2.92	2.42
MAX	11	30	16	35	113	221	34	19	12	8.0	4.5	3.2
MIN	4.7	11	14	15	12	15	19	12	8.0	3.0	1.9	1.9
AC-FT	462	851	926	1400	1010	2700	1440	954	568	325	180	144

CAL YR 1990 TOTAL 4243.9 MEAN 11.6 MAX 373 MIN 1.6 AC-FT 8420
WTR YR 1991 TOTAL 5527.4 MEAN 15.1 MAX 221 MIN 1.9 AC-FT 10960

e Estimated.

10262000 MOJAVE RIVER NEAR HODGE, CA

LOCATION.--Lat 34°50'09", long 117°11'27", in SE 1/4 SE 1/4 sec.28, T.9 N., R.3 W., San Bernardino County, Hydrologic Unit 18090208, at county bridge 1.5 mi north of Hodge, 10.9 mi southwest of Barstow, 42 mi downstream from Mojave River Forks Reservoir, 48 mi downstream from Silverwood Lake on West Fork Mojave River, and 54 mi downstream from Lake Arrowhead on Deep Creek (East Fork Mojave River).

DRAINAGE AREA.--1,091 mi².

PERIOD OF RECORD.--October 1930 to September 1932, October 1970 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,260 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1970, at different datum.

REMARKS.--Regulation by Lake Arrowhead, capacity 48,000 acre-ft, used principally for recreation; Silverwood Lake, capacity, 78,000 acre-ft, used for storage and distribution of imported water and recreation; and Mojave River Forks Reservoir, capacity 89,700 acre-ft. Diversion and pumping for irrigation of about 12,000 acres upstream from station.

AVERAGE DISCHARGE.--23 years (water years 1931-32, 1971-91), 34.7 ft³/s, 25,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s, Feb. 10, 1978, gage height, 8.80 ft, on basis of slope-area measurement of peak flow; no flow for all or many days each year.

EXTREMES FOR CURRENT YEAR.--No flow for 1991 water year.

10262500 MOJAVE RIVER AT BARSTOW, CA

LOCATION.--Lat 34°54'25", long 117°01'19", in SW 1/4 SW 1/4 sec.31, T.10 N., R.1 W., San Bernardino County, Hydrologic Unit 18090208, on left bank 75 ft upstream from bridge on U.S. Highway 91 at Barstow, 54 mi downstream from Mojave River Forks Reservoir, 60 mi downstream from Silverwood Lake on West Fork Mojave River, and 66 mi downstream from Lake Arrowhead on Deep Creek (East Fork Mojave River).

DRAINAGE AREA.--1,291 mi².

PERIOD OF RECORD.--October 1930 to current year.

REVISED RECORDS.--WSP 1564; 1932.

GAGE.--Water-stage recorder. Datum of gage is 2,089.34 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Regulation by Lake Arrowhead, capacity, 48,000 acre-ft, used principally for recreation; Silverwood Lake, capacity, 78,000 acre-ft, used for storage and distribution of imported water and recreation; and Mojave River Forks Reservoir, capacity, 89,700 acre-ft. Diversions and pumping for irrigation of about 15,000 acres upstream from station.

AVERAGE DISCHARGE.--61 years, 23.1 ft³/s, 16,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,300 ft³/s, Mar. 3, 1938, gage height, 8.60 ft on basis of slope-area measurement of peak flow; no flow for all or most of each year.

EXTREMES FOR CURRENT YEAR.--No flow for 1991 water year.

10263000 MOJAVE RIVER AT AFTON, CA

LOCATION.--Lat 35°02'14", long 116°23'00", in NW 1/4 SE 1/4 sec.18, T.11 N., R.6 E., San Bernardino County, Hydrologic Unit 18090208, on right bank side of right pier of Union Pacific Railroad bridge, 0.3 mi west of Afton, and 63 mi east of Barstow.

DRAINAGE AREA.--2,121 mi².

PERIOD OF RECORD.--October 1929 to September 1932, October 1952 to current year. Records for water year 1930 incomplete; yearly estimate published in WSP 1314. Records for water years 1979 and 1980 incomplete; discharge measurements only were published at that time.

REVISED RECORDS.--WSP 1564: 1931.

GAGE.--Water-stage recorder. Datum of gage is 1,398.15 ft above National Geodetic Vertical Datum of 1929. Dec. 21, 1929, to Sept. 30, 1932, at site 1.7 mi downstream at different datum; October 1952 to May 1978, at datum 2 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Natural flow affected by ground-water withdrawals, diversions, municipal use, and storage in reservoirs 100 mi upstream. For description of upstream reservoirs see Mojave River at Barstow (station 10262500).

AVERAGE DISCHARGE.--40 years (water years 1930-32, 1953-78, 1981-91), 5.98 ft³/s, 4,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s, Jan. 26, 1969, gage height, 12.40 ft (present datum), from rating curve extended above 3,200 ft³/s on basis of slope-area measurement of peak flow; no flow at times during many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1115	273	2.92	July 7	2130	*1,000	*3.96

Minimum daily, 0.10 ft³/s, Aug. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.49	.64	.66	.66	40	1.3	.98	1.2	1.0	.26	.17
2	.29	.49	.65	.64	.65	3.7	1.3	.97	1.3	.97	.20	.18
3	.30	.51	.63	.81	.64	1.0	1.4	.97	1.2	.82	.18	.18
4	.29	.51	.64	.92	.64	.96	1.5	.92	1.1	.75	.17	.19
5	.26	.56	.64	.88	.69	.90	1.5	.87	1.0	.72	.23	.22
6	.25	.53	.64	.73	.69	.84	1.5	.85	1.1	.73	.24	2.6
7	.25	.52	.64	.65	.71	.84	1.5	.74	1.1	63	.23	6.5
8	.26	.56	.64	.64	.75	.84	1.5	.76	1.1	8.8	.20	.16
9	.29	.59	.64	.64	.81	.84	1.7	.66	1.1	.54	.17	.12
10	.32	.69	.64	.64	1.1	.94	1.8	.62	1.1	.46	.16	.11
11	.33	.70	.64	.64	1.2	.88	1.6	.63	.97	.45	.21	.12
12	.30	.63	.64	.64	1.2	.87	1.5	.60	.90	.46	.16	.12
13	.28	.65	.65	.64	1.0	.87	1.3	.53	.81	.47	.14	.13
14	.32	.67	.66	.62	1.1	.86	1.3	.49	.83	.47	.13	.14
15	.36	.67	.66	.63	1.1	.85	1.2	.47	1.1	.45	.12	.15
16	.38	.69	.61	.59	1.1	.87	1.2	.38	.97	.46	.12	.18
17	.38	.73	.58	.59	1.2	.87	1.3	.36	.94	.49	.12	.20
18	.42	.69	.61	.61	1.1	.87	1.2	.41	.97	.50	.12	.20
19	.42	.63	.64	.64	1.3	.88	1.2	.46	.93	.50	.11	.21
20	.38	.65	.60	.62	1.5	.93	1.2	.47	.91	.50	.10	.23
21	.39	.64	.58	.60	1.6	.93	1.1	.49	.97	.52	.11	.24
22	.43	.67	.56	.60	1.8	.96	1.2	.53	1.2	.52	.11	.27
23	.44	.66	.56	.61	1.8	.98	1.2	.57	1.4	.44	.12	.29
24	.44	.70	.62	.61	1.7	1.0	1.2	.63	1.1	.40	.14	.28
25	.46	.60	.67	.65	1.8	1.0	1.2	.65	1.2	.37	.17	.27
26	.48	.60	.63	.69	1.2	1.0	1.1	.67	1.1	.33	.19	.29
27	.48	.62	.60	.64	1.1	2.9	1.1	.72	1.1	.33	.18	.30
28	.44	.63	.61	.64	1.9	1.8	1.1	.76	1.1	.30	.18	.30
29	.44	.64	.64	.64	---	1.2	1.0	.77	1.1	.27	.21	.30
30	.46	.64	.65	.65	---	1.2	1.0	.82	1.0	.20	.20	.30
31	.47	---	.63	.68	---	1.3	---	.86	---	.28	.17	---
TOTAL	11.28	18.56	19.44	20.44	32.04	73.88	39.2	20.61	31.90	86.50	5.15	14.95
MEAN	.36	.62	.63	.66	1.14	2.38	1.31	.66	1.06	2.79	.17	.50
MAX	.48	.73	.67	.92	1.9	40	1.8	.98	1.4	63	.26	6.5
MIN	.25	.49	.56	.59	.64	.84	1.0	.36	.81	.20	.10	.11
AC-FT	22	37	39	41	64	147	78	41	63	172	10	30

CAL YR 1990 TOTAL 220.11 MEAN .60 MAX 1.8 MIN .09 AC-FT 437
WTR YR 1991 TOTAL 373.95 MEAN 1.02 MAX 63 MIN .10 AC-FT 742

10263500 BIG ROCK CREEK NEAR VALYERMO, CA

LOCATION.--Lat 34°25'15", long 117°50'19", in SE 1/4 NE 1/4 sec.20, T.4 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, on left bank 0.1 mi upstream from Punchbowl Canyon and 1.9 mi southeast of Valyermo.

DRAINAGE AREA.--22.9 mi².

PERIOD OF RECORD.--January 1923 to current year. Monthly discharge only for June 1938 to January 1939, published in WSP 1314. Prior to October 1954, published as Rock Creek near Valyermo.

REVISED RECORDS.--WSP 1314: 1938-39. WSP 1564: 1932, 1937, 1939(M). WSP 1927: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,050 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 4, 1938, at same site at different datums. May 4, 1938, to Jan. 26, 1939, at site 0.2 mi downstream (below Punchbowl Canyon) at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--68 years (water years 1924-91), 17.1 ft³/s, 12,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,300 ft³/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; minimum daily, 0.70 ft³/s, Nov. 5, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0800	*295	*3.25	Apr. 6	2100	80	2.71
Mar. 5	0415	53	2.61				

Minimum daily, 1.4 ft³/s, Nov. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.9	1.6	1.9	2.3	129	32	24	18	e7.9	e6.2	e4.4
2	1.8	1.8	1.6	1.9	2.4	33	31	22	17	e7.8	e6.2	e4.4
3	1.8	1.7	1.6	2.3	2.4	21	32	21	17	e7.8	e6.2	e4.4
4	1.9	1.7	1.6	2.0	2.4	20	38	20	17	e7.7	e6.2	e4.5
5	2.0	1.7	1.6	1.9	2.4	37	56	20	16	e7.6	e6.2	e4.5
6	2.1	1.7	1.6	1.9	2.4	19	71	20	16	e7.5	e6.1	e4.4
7	2.0	1.8	1.6	1.9	2.6	17	70	20	16	e7.5	e6.1	e4.4
8	2.0	1.9	1.6	2.0	2.6	13	58	22	15	7.4	e6.1	e4.4
9	2.0	1.9	1.6	2.1	2.5	11	49	23	15	e7.4	e6.1	e4.3
10	2.0	1.9	1.6	2.1	2.6	11	45	21	14	7.1	e6.0	e4.3
11	2.0	1.8	1.7	2.1	2.7	10	41	21	12	7.8	e6.0	e4.3
12	2.0	1.8	1.9	2.1	2.7	9.4	33	21	12	7.3	e6.0	e4.4
13	2.0	1.7	1.9	2.2	2.7	9.4	29	20	12	6.8	e6.0	e4.4
14	2.0	1.8	1.9	2.3	2.7	8.7	29	20	12	6.9	e6.0	e4.4
15	2.0	1.6	1.8	2.2	2.8	8.9	29	20	11	7.5	6.0	e4.4
16	1.9	1.4	1.8	2.1	2.7	8.6	30	21	12	7.4	e5.6	e4.3
17	1.9	1.6	1.7	2.3	2.6	8.1	28	22	11	7.3	e5.3	e4.3
18	2.0	1.6	1.8	2.3	2.6	8.8	27	21	11	7.3	e5.2	e4.3
19	2.1	1.6	1.8	2.2	2.6	15	26	19	9.6	7.4	e5.1	e4.3
20	2.0	1.8	2.0	2.1	2.6	13	26	18	e9.5	7.2	e5.0	e4.3
21	2.0	1.7	2.1	2.1	2.5	12	24	17	e9.0	6.5	e4.9	e4.4
22	1.9	1.6	2.1	2.2	2.7	11	24	17	e8.6	6.1	e4.8	e4.4
23	1.8	1.6	2.0	2.3	2.5	11	24	17	8.4	6.2	4.7	e4.3
24	1.8	1.6	1.9	2.2	2.5	13	25	17	8.3	6.2	4.8	e4.3
25	2.0	1.5	1.9	2.3	2.7	17	25	17	8.1	6.5	4.5	4.2
26	2.0	1.6	1.9	2.3	2.7	16	24	17	e8.1	6.3	e4.5	4.3
27	2.0	1.7	1.9	2.3	4.1	15	23	18	e8.1	e6.3	e4.5	4.4
28	1.9	1.7	1.9	2.3	30	19	23	18	8.1	e6.3	e4.5	4.5
29	1.8	1.7	1.9	2.4	---	21	22	18	e8.0	e6.2	e4.4	4.3
30	1.8	1.7	1.9	2.4	---	25	23	19	e7.9	e6.2	4.3	4.2
31	1.8	---	1.9	2.3	---	28	---	19	---	e6.2	4.3	---
TOTAL	60.1	51.1	55.7	67.0	101.0	598.9	1017	610	355.7	217.6	167.8	130.7
MEAN	1.94	1.70	1.80	2.16	3.61	19.3	33.9	19.7	11.9	7.02	5.41	4.36
MAX	2.1	1.9	2.1	2.4	30	129	71	24	18	7.9	6.2	4.5
MIN	1.8	1.4	1.6	1.9	2.3	8.1	22	17	7.9	6.1	4.3	4.2
AC-FT	119	101	110	133	200	1190	2020	1210	706	432	333	259

CAL YR 1990 TOTAL 1225.5 MEAN 3.36 MAX 14 MIN 1.4 AC-FT 2430
WTR YR 1991 TOTAL 3432.6 MEAN 9.40 MAX 129 MIN 1.4 AC-FT 6810

e Estimated.

10263675 BIG ROCK CREEK WASH AT HIGHWAY 138, NEAR LLANO, CA

LOCATION.--Lat 34°30'21", long 117°50'45", in NE 1/4 SW 1/4 sec.20, T.5 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, between two major channels of Big Rock Creek, at State Highway 138 crossing, and 1.6 mi west of Llano.

DRAINAGE AREA.--53.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Two water-stage recorders (one on each of two main channels), five crest-stage gages, and box culvert control (each channel). Elevation of gage is 3,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Low flows affected by diversion 3 mi upstream for municipal supply. Storm runoff unaffected.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266 ft³/s, Mar. 1, 1991, from rating curve extended above 128 ft³/s on basis of culvert computations (east channel), and rating curve extended above 106 ft³/s on basis of culvert computations (west channel); no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Combined Discharge (east and west channels) (ft ³ /s)
Mar. 1	0930	*266
Apr. 24	1630	54

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	63	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	10	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.64	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	6.3	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	2.2	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.33	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	1.4	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	82.16	9.40	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	2.65	.31	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	63	1.9	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	163	19	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 91.56 MEAN .25 MAX 63 MIN .00 AC-FT 182

ANTELOPE VALLEY

10263675 BIG ROCK CREEK WASH AT HIGHWAY 138, NEAR LLANO, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 27, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 0.85 in, Feb. 27, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 0.85 in, Feb. 27; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.22	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
3	.00	.00	.00	.67	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.30	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.03
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
9	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.26	.00	.00	.00	.00	.00	.00
19	.00	.05	.00	.00	.00	.37	.00	.00	.00	.00	.00	.00
20	.00	.05	.00	.00	.00	.38	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.46	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.85	.75	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.38	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.02	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.10	0.00	1.02	1.23	2.80	0.00	0.00	0.00	0.10	0.00	0.05
CAL YR 1990	TOTAL 2.03											
WTR YR 1991	TOTAL 5.30											

10264502 PEACH TREE CREEK NEAR LITTLEROCK, CA

LOCATION.--Lat 34°31'34", long 117°59'58", in NW 1/4 NE 1/4 sec.14, T.5 N., R.11 W., Los Angeles County, Hydrologic Unit 18090206, 150 ft northeast of junction of Zinney Road and Avenue U-3 and 1.1 mi northwest of Littlerock.

DRAINAGE AREA.--0.04 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and broad-crested weir. Elevation of gage is 2,850 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4.3 ft³/s, Mar. 19, 1991, gage height, 0.83 ft, from rating curve extended above 0.24 ft³/s on basis of critical-depth computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1.5 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0730	2.0	0.70	Mar. 19	0025	*4.3	*0.83

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.19	.00	.00	.00	.00	.00	.00
2	.04	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.02	.01	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00
4	.01	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
9	.01	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
18	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00
19	.01	.01	.00	.00	.00	e .57	.00	.00	.00	.00	.00	.00
20	.01	.02	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
21	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
26	.01	.01	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.17	e .31	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.08	.08	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.01	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.26	0.06	0.00	0.13	0.25	1.35	0.00	0.00	0.00	0.01	0.01	0.00
MEAN	.008	.002	.000	.004	.009	.044	.000	.000	.000	.000	.000	.000
MAX	.12	.02	.00	.08	.17	.57	.00	.00	.00	.01	.01	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.5	.1	.00	.3	.5	2.7	.00	.00	.00	.02	.02	.00

CAL YR 1990	TOTAL 1.00	MEAN .003	MAX .12	MIN .00	AC-FT 2.0
WTR YR 1991	TOTAL 2.07	MEAN .006	MAX .57	MIN .00	AC-FT 4.1

e Estimated.

ANTELOPE VALLEY

10264502 PEACH TREE CREEK NEAR LITTLEROCK, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 14, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 0.69 in, Mar. 26, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 0.69 in, Mar. 26; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.57	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.65	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.33	.00	.02	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.05
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00
9	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.01	.00	.03	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.38	.00	.00	.00	.00	.00	.00
19	.00	.09	.00	.00	.00	.59	.00	.00	.00	.00	.00	.00
20	.00	.05	.00	.00	.00	.30	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.22	.00	.00	.00	.00	.00	.00
26	.00	.02	.00	.00	.00	.69	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.67	.68	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.33	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.16	0.00	1.08	1.00	3.70	0.00	0.00	0.00	0.06	0.00	0.06
CAL YR 1990	TOTAL 2.43											
WTR YR 1991	TOTAL 6.06											

10264508 SOMERSET CREEK AT PALMDALE, CA

LOCATION.--Lat 34°34'07", long 118°05'06", in NE 1/4 NW 1/4 sec.31, T.6 N., R.11 W., Los Angeles County, Hydrologic Unit 18090206, on left bank, 100 ft south of the terminus of Westview Drive, 0.1 mi west of 25th Street East, 0.1 mi south of Avenue R-4, and 1.5 mi southeast of Palmdale.

DRAINAGE AREA.--Indeterminate, but less than 0.50 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1989 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and weir control. Elevation of gage is 2,640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8.6 ft³/s, Mar. 1, 1991, gage height, 1.06 ft, from rating curve extended above 0.12 ft³/s on basis of weir and critical-depth computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2.5 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0815	*8.6	*1.06	Mar. 26	1925	8.3	1.05
Mar. 19	0325	6.4	0.99				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.2	.00	.00	.00	.00	.00	.00
2	.00	.00	.01	.00	.00	.00	.00	.00	.01	.00	.00	.00
3	.01	.00	.00	.15	.00	.00	.00	.00	.00	.00	.01	.00
4	.00	.00	.00	.17	.00	.05	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.01	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.01
9	.00	.00	.00	.01	.00	.00	.00	.00	.01	.00	.00	.00
10	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
11	.00	.01	.00	.00	.00	.01	.01	.00	.01	.00	.00	.00
12	.01	.01	.00	.00	.00	.00	.01	.00	.00	.00	.01	.00
13	.00	.01	.00	.00	.00	.12	.01	.00	.00	.00	.00	.00
14	.01	.02	.00	.00	.00	.00	.01	.00	.00	.01	.00	.00
15	.00	.01	.00	.00	.00	.03	.01	.00	.01	.00	.00	.00
16	.00	.02	.00	.00	.00	.01	.01	.00	.01	.00	.00	.00
17	.00	.02	.00	.00	.00	.00	.01	.00	.01	.00	.00	.00
18	.00	.02	.00	.00	.00	.04	.01	.00	.01	.00	.00	.00
19	.00	.02	.00	.00	.00	.50	.01	.00	.00	.00	.00	.00
20	.00	.03	.00	.00	.01	.14	.00	.00	.00	.00	.00	.00
21	.00	.02	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
22	.00	.02	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
23	.01	.02	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
24	.00	.02	.00	.00	.00	.00	.01	.00	.00	.01	.00	.00
25	.00	.02	.00	.00	.01	.10	.01	.01	.00	.00	.00	.00
26	.00	.04	.00	.00	.01	.54	.01	.00	.00	.01	.00	.00
27	.00	.02	.00	.00	.22	.36	.00	.00	.00	.00	.00	.00
28	.00	.02	.00	.00	.19	.00	.01	.00	.00	.00	.01	.00
29	.00	.02	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.01	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.01	.00	---
TOTAL	0.05	0.39	0.01	0.34	0.44	3.11	0.16	0.01	0.07	0.06	0.03	0.02
MEAN	.002	.013	.000	.011	.016	.10	.005	.000	.002	.002	.001	.001
MAX	.01	.04	.01	.17	.22	1.2	.01	.01	.01	.02	.01	.01
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.1	.8	.02	.7	.9	6.2	.3	.02	.1	.1	.06	.04

CAL YR 1990	TOTAL 2.43	MEAN .007	MAX .11	MIN .00	AC-FT 4.8
WTR YR 1991	TOTAL 4.69	MEAN .013	MAX 1.2	MIN .00	AC-FT 9.3

ANTELOPE VALLEY

10264508 SOMERSET CREEK AT PALMDALE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 23, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.04 in, Mar. 26, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.04 in, Mar. 26; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.92	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.70	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.40	.00	.05	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.01
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.12	.00	.00
9	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.31	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00	.00
19	.00	.05	.00	.00	.00	.50	.00	.00	.00	.00	.00	.00
20	.00	.08	.01	.00	.00	.39	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.44	.00	.00	.00	.00	.00	.00
26	.00	.07	.00	.00	.00	1.04	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.65	.35	.01	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.45	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.20	0.01	1.22	1.10	4.47	0.01	0.00	0.00	0.12	0.00	0.02

CAL YR 1990 TOTAL 2.44
WTR YR 1991 TOTAL 7.15

10264510 INN CREEK AT PALMDALE, CA

LOCATION.--Lat 34°34'51", long 118°08'05", in SW 1/4 NE 1/4 sec.27, T.6 N., R.12 W., Los Angeles County, Hydrologic Unit 18090206, on left bank 100 ft north of Camino Real Avenue, 0.1 mi south of Elizabeth Lake Road, and 1 mi west of Palmdale.

DRAINAGE AREA.--0.03 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10 ft³/s, Mar. 1, 1991, gage height, 7.17 ft, from rating curve extended above 1.4 ft³/s on basis of culvert computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3.5 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	0110	5.4	6.46	Mar. 19	0245	7.4	6.74
Mar. 1	0300	*10	*7.17	Mar. 26	2035	9.6	7.05

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.03	.01	.00	.00	1.0	.00	.02	.00	.00	.00	.00
2	.02	.03	.01	.00	.01	.00	.00	.01	.00	.00	.00	.00
3	.02	.02	.01	.20	.00	.00	.00	.03	.00	.00	.00	.00
4	.02	.03	.01	.15	.00	.00	.00	.04	.00	.00	.01	.00
5	.00	.02	.01	.02	.00	.00	.00	.01	.00	.00	.01	.01
6	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.02	.02
7	.00	.01	.00	.00	.00	.00	.00	.01	.00	.01	.01	.02
8	.00	.01	.00	.00	.00	.00	.00	.01	.01	.04	.00	.02
9	.00	.02	.00	.02	.00	.00	.00	.02	.01	.02	.01	.02
10	.01	.03	.00	.00	.00	.01	.00	.01	.02	.00	.02	.00
11	.00	.04	.00	.00	.00	.00	.00	.01	.01	.01	.04	.00
12	.00	.04	.00	.00	.00	.00	.00	.03	.01	.01	.03	.00
13	.01	.03	.00	.00	.00	.10	.00	.02	.01	.02	.00	.00
14	.01	.02	.00	.00	.00	.00	.00	.00	.05	.02	.00	.00
15	.00	.02	.01	.01	.01	.03	.00	.01	.05	.03	.00	.00
16	.00	.04	.00	.00	.00	.00	.00	.01	.03	.02	.00	.01
17	.00	.02	.00	.00	.00	.00	.00	.01	.04	.03	.00	.01
18	.00	.02	.00	.00	.02	.10	.00	.00	.02	.01	.00	.02
19	.00	.04	.00	.00	.00	.47	.01	.00	.02	.02	.01	.01
20	.01	.06	.00	.01	.01	.24	.00	.00	.02	.00	.00	.02
21	.01	.04	.00	.00	.00	.00	.04	.00	.03	.00	.01	.02
22	.02	.01	.00	.00	.01	.00	.01	.00	.03	.00	.00	.04
23	.01	.01	.01	.01	.01	.00	.01	.00	.02	.00	.01	.02
24	.01	.02	.02	.00	.01	.00	.00	.00	.03	.01	.00	.02
25	.01	.01	.02	.01	.02	.34	.00	.00	.02	.01	.00	.01
26	.01	.05	.00	.00	.02	1.3	.01	.00	.00	.02	.01	.01
27	.00	.01	.00	.02	.45	.58	.01	.00	.00	.02	.01	.01
28	.00	.00	.00	.01	.30	.02	.02	.00	.00	.03	.01	.02
29	.00	.00	.00	.01	---	.00	.01	.00	.00	.03	.01	.01
30	.01	.01	.00	.00	---	.00	.01	.00	.00	.02	.01	.01
31	.01	---	.00	.01	---	.00	---	.00	---	.00	.00	---
TOTAL	0.20	0.71	0.11	0.48	0.87	4.19	0.13	0.25	0.43	0.38	0.23	0.33
MEAN	.006	.024	.004	.015	.031	.14	.004	.008	.014	.012	.007	.011
MAX	.02	.06	.02	.20	.45	1.3	.04	.04	.05	.04	.04	.04
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.4	1.4	.2	1.0	1.7	8.3	.3	.5	.9	.8	.5	.7

CAL YR 1990 TOTAL 8.62 MEAN .024 MAX .28 MIN .00 AC-FT 17
WTR YR 1991 TOTAL 8.31 MEAN .023 MAX 1.3 MIN .00 AC-FT 16

ANTELOPE VALLEY

10264510 INN CREEK AT PALMDALE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 28, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.44 in, Mar. 26, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.44 in, Mar. 26; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.82	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.72	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.40	.00	.05	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.05
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.12	.00	.00
9	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.31	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
15	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.28	.00	.00	.00	.00	.00	.00
19	.00	.05	.00	.00	.00	.52	.00	.00	.00	.00	.00	.00
20	.00	.09	.00	.00	.00	.42	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.64	.00	.00	.00	.00	.00	.00
26	.00	.09	.00	.00	.00	1.44	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.85	.32	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.53	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.25	0.00	1.23	1.38	4.92	0.00	0.00	0.01	0.16	0.00	0.10

WTR YR 1991 TOTAL 8.05

10264530 PINE CREEK NEAR PALMDALE, CA

LOCATION.--Lat 34°36'09", long 118°14'48", in SE 1/4 SW 1/4 sec.15, T.6 N., R.13 W., Los Angeles County, Hydrologic Unit 18090206, on left bank at culvert on Elizabeth Lake Road and 7.5 mi northwest of Palmdale.

DRAINAGE AREA.--1.78 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to September 1973, October 1977 to September 1988 (crest-stage partial-record station), October 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 3,010 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1958 to September 1973, October 1977 to September 1988, crest-stage gage at same site.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69 ft³/s, Feb. 25, 1969, gage height, 15.33 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5.0 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0450	22	12.75	Mar. 26	2235	*24	*12.89

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.70	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.19	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.17	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	2.3	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.09	.18	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.49	3.72	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.017	.12	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.40	2.3	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	1.0	7.4	.00	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.36 MEAN .001 MAX .13 MIN .00 AC-FT .7
WTR YR 1991 TOTAL 4.21 MEAN .012 MAX 2.3 MIN .00 AC-FT 8.4

10264530 PINE CREEK NEAR PALMDALE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--January 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 22, 1989. Supplemental weight-driven recording rain gage since Jan. 23, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.71 in, Mar. 1, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.71 in, Mar. 1; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.71	.06	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.72	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.46	.00	.08	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.11
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.00	.00
9	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.47	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.05	.00	.00	.12	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.71	.00	.00	.00	.00	.00	.00
19	.00	.13	.00	.00	.00	.82	.00	.00	.00	.00	.00	.00
20	.00	.12	.01	.03	.00	.70	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.04
25	.00	.00	.00	.00	.00	1.08	.00	.00	.00	.00	.00	.00
26	.00	.01	.00	.00	.00	1.64	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	1.32	.37	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	1.32	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.26	0.08	1.32	2.64	7.84	0.06	0.00	0.00	0.15	0.00	0.15
CAL YR 1990	TOTAL 5.50											
WTR YR 1991	TOTAL 12.50											

10264550 CITY RANCH CREEK NEAR PALMDALE, CA

LOCATION.--Lat 34°35'00", long 118°10'36", in SE 1/4 NW 1/4 sec.29, T.6 N., R.12 W., Los Angeles County, Hydrologic Unit 18090206, on right bank at culvert on Elizabeth Lake Road and 3 mi west of Palmdale.

DRAINAGE AREA.--0.39 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,760 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10 ft³/s, Mar. 26, 1991, gage height, 3.98 ft, from rating curve based on culvert computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5.0 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0315	5.7	3.58	Mar. 26	2245	*10	*3.98
Mar. 19	0255	6.9	3.70				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.31	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.43	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
25	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.08	.18	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.01	0.13	2.90	0.00	0.00	0.00	0.00	0.00	0.02
MEAN	.000	.000	.000	.000	.005	.094	.000	.000	.000	.000	.000	.001
MAX	.00	.00	.00	.01	.08	1.6	.00	.00	.00	.00	.00	.02
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.02	.3	5.8	.00	.00	.00	.00	.00	.04

CAL YR 1990 TOTAL 0.09 MEAN .000 MAX .05 MIN .00 AC-FT .2
WTR YR 1991 TOTAL 3.06 MEAN .008 MAX 1.6 MIN .00 AC-FT 6.1

ANTELOPE VALLEY

10264550 CITY RANCH CREEK NEAR PALMDALE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 23, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.82 in, Mar. 26, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.82 in, Mar. 26; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.83	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.59	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.18	.00	.05	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.13
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00
9	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.01	.00	.08	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.02	.00	.00	.08	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.43	.00	.00	.00	.00	.00	.00
19	.00	.04	.00	.00	.00	.67	.00	.00	.00	.00	.00	.00
20	.00	.07	.00	.02	.00	.51	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.23
25	.00	.00	.00	.00	.00	.70	.00	.00	.00	.00	.00	.00
26	.00	.07	.00	.00	.00	1.82	.00	.00	.00	.00	.00	.03
27	.00	.00	.00	.00	.99	.47	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.83	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.18	0.02	0.90	1.82	6.84	0.00	0.00	0.00	0.14	0.00	0.39
CAL YR 1990	TOTAL 3.48											
WTR YR 1991	TOTAL 10.29											

10264555 ESTATES CREEK NEAR QUARTZ HILL, CA

LOCATION.--Lat 34°38'19", long 118°14'52", in SE 1/4 NW 1/4 sec.3, T.6 N., R.13 W., Los Angeles County, Hydrologic Unit 18090206, on right bank 30 ft north of Avenue M-8, 0.7 mi west of 60th Street West, and 2 mi southwest of Quartz Hill.

DRAINAGE AREA.--0.11 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1989 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and weir control. Elevation of gage is 2,700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14 ft³/s, Mar. 1, 1991, gage height, 4.75 ft, from rating curve extended above 0.95 ft³/s on basis of weir computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2.0 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	0025	2.1	4.29	Mar. 18	2400	3.4	4.36
Mar. 1	0505	*14	*4.75	Mar. 26	1910	12	4.61
Mar. 13	1730	2.3	4.30	Sept. 24	1700	3.4	4.36

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.00	.00	1.8	.02	.01	.00	.00	.00	.00
2	.01	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
3	.03	.00	.00	e.26	.01	.00	.00	.00	.00	.00	.01	.00
4	.00	.00	.00	.25	.00	.01	.00	.00	.00	.00	.00	.00
5	.01	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.02
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.01	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00
9	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
10	.02	.01	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
11	.02	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.01	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
15	.00	.00	.01	.00	.00	.12	.00	.00	.00	.00	.00	.01
16	.00	.00	.00	.00	.00	.00	.01	.00	.00	.01	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
19	.00	.03	.00	.00	.01	.26	.00	.00	.00	.00	.00	.00
20	.00	.04	.00	.18	.01	.26	.00	.00	.00	.00	.00	.01
21	.00	.00	.00	.01	.00	.00	.00	.01	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.01	.06
25	.00	.00	.00	.00	.00	.60	.00	.00	.00	.00	.02	.00
26	.00	.02	.00	.00	.00	e1.9	.00	.01	.01	.00	.00	.00
27	.00	.00	.00	.01	1.3	.67	.00	.01	.00	.00	.00	.00
28	.00	.00	.00	.00	.64	.00	.00	.01	.00	.01	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.01	.00	.01	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.01	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.01	---	.00	.00	---
TOTAL	0.11	0.10	0.01	0.75	1.97	5.87	0.04	0.09	0.02	0.06	0.05	0.10
MEAN	.004	.003	.000	.024	.070	.19	.001	.003	.001	.002	.002	.003
MAX	.03	.04	.01	.26	1.3	1.9	.02	.01	.01	.02	.02	.06
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.2	.2	.02	1.5	3.9	12	.08	.2	.04	.1	.1	.2

CAL YR 1990 TOTAL 3.72 MEAN .010 MAX .47 MIN .00 AC-FT 7.4
WTR YR 1991 TOTAL 9.17 MEAN .025 MAX 1.9 MIN .00 AC-FT 18

e Estimated.

ANTELOPE VALLEY

10264555 ESTATES CREEK NEAR QUARTZ HILL, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since May 1, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.71 in, Mar. 1, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.71 in, Mar. 1; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.71	.06	.00	.00	.01	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
3	.00	.00	.00	.48	.00	.00	.00	.00	.00	.00	.00	.01
4	.00	.00	.00	.42	.00	.04	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.05
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.12	.00	.00
9	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.02	.00	.00	.00	.00	.00	.00	.01	.00	.00
13	.00	.00	.00	.00	.00	.43	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.04	.00	.00	.16	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.36	.00	.00	.00	.00	.00	.00
19	.00	.17	.02	.00	.00	.33	.00	.00	.00	.00	.00	.00
20	.00	.14	.00	.09	.00	.55	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
24	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.20
25	.00	.00	.00	.00	.00	.87	.00	.00	.00	.00	.00	.01
26	.00	.08	.00	.00	.00	1.33	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	1.18	.47	.00	.00	.00	.01	.00	.00
28	.00	.00	.00	.00	.84	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.01	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.39	0.08	1.10	2.02	6.31	0.06	0.00	0.00	0.16	0.02	0.27
CAL YR 1990	TOTAL 3.58											
WTR YR 1991	TOTAL 10.41											

10264605 JOSHUA CREEK NEAR MOJAVE, CA

LOCATION.--Lat 35°00'45", long 118°20'40", in SE 1/4 SE 1/4 sec.27, T.11 N., R.14 W., Kern County, Hydrologic Unit 18090206, on right bank at culvert on Tehachapi-Willow Springs Road 10 mi southwest of Mojave.

DRAINAGE AREA.--3.83 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to September 1973 (annual maximum only), October 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 3,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1958 to September 1973, nonrecording gage at same site at different datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,540 ft³/s, Aug. 16, 1965, gage height unknown, on basis of slope-area measurement of peak flow; no flow for all or many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5.0 ft³/s (and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0220	*1.3	*2.36				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 0.01 MEAN .000 MAX .01 MIN .00 AC-FT .02

10264605 JOSHUA CREEK NEAR MOJAVE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Tipping-bucket rain gage since Feb. 22, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.37 in, Feb. 27, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.37 in, Feb. 27; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.82	.00	.05	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.28	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.30	.00	.34	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.31	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.34	.00	.00	.00	.00	.00	.00
19	.00	.16	.02	.00	.00	.50	.00	.00	.00	.00	.00	.00
20	.00	.01	.05	.02	.00	.98	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.09	.00	.00	.00	.37	.00	.00	.00	.00	.00	.00
26	.00	.14	.00	.00	.00	.34	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	1.37	.52	.01	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	1.10	.09	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.40	0.09	0.92	2.47	4.35	0.06	0.06	0.00	0.00	0.00	0.02

CAL YR 1990 TOTAL 3.11
WTR YR 1991 TOTAL 8.37

10264675 ROGERS LAKE TRIBUTARY AT EDWARDS AIR FORCE BASE, CA

LOCATION.--Lat 34°56'06", long 117°53'29", in NE 1/4 NW 1/4 sec.13, T.10 N., R.10 W., Kern County, Hydrologic Unit 18090206, on right bank at culvert on U.S. Government Railroad, 330 ft east of Rosamond Boulevard, and 0.75 mi west of Rogers Lake.

DRAINAGE AREA.--1.73 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,340 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. No regulation or diversion upstream from station. Inflow can occur from artificial ditch 10 ft upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11 ft³/s, Apr. 14, 1989, gage height, 4.81 ft, from rating curve on basis of culvert computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5.0 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 26	2105	*4.5	*4.30				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.55	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.91	0.00	0.12	0.04	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.029	.000	.004	.001	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.55	.00	.12	.02	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	1.8	.00	.2	.08	.00	.00	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 1.07 MEAN .003 MAX .55 MIN .00 AC-FT 2.1

ANTELOPE VALLEY

10264675 ROGERS LAKE TRIBUTARY AT EDWARDS AIR FORCE BASE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--January 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 21, 1989. Supplemental weight-driven recording rain gage since Jan. 13, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 0.80 in, Mar. 26, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 0.80 in, Mar. 26; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.58	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.34	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.19	.00	.01	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.01	.00	.00	.00	.00	.00	.06	.00	.00
9	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.01	.00	.01	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.34	.00	.00	.00	.00	.00	.00
20	.00	.27	.00	.01	.00	.38	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.80	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.45	.47	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.32	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.27	0.00	0.68	0.77	2.86	0.00	0.00	0.00	0.06	0.00	0.00

CAL YR 1990	TOTAL 1.44
WTR YR 1991	TOTAL 4.64

10265150 HOT CREEK AT FLUME, NEAR MAMMOTH, CA

LOCATION.--Lat 37°40'08", long 118°49'00", in SW 1/4 SE 1/4 sec.19, T.3 S., R.29 E., Mono County, Hydrologic Unit 18090102, on right bank 2.6 mi north of Whitmore Hot Springs and 8.4 mi east of Mammoth.

DRAINAGE AREA.--68.3 mi².

PERIOD OF RECORD.--October 1989 to current year. Daily discharges for 1986 published in Water-Resources Investigations Report 89-4033 as "Hot Creek Flume."

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 6,950 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records excellent. Minor diversions for domestic and agricultural use upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 109 ft³/s, June 14, 1991, gage height, 1.92 ft; minimum daily, 30 ft³/s, Dec. 27, 28, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 6	1600	101	1.83	June 14	1030	*109	*1.92

Minimum daily, 30 ft³/s, Dec. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	34	33	31	33	34	40	38	40	57	50	43
2	32	34	32	31	33	32	41	38	41	55	48	43
3	32	33	32	32	33	34	42	38	42	56	47	43
4	32	34	32	31	33	38	43	37	50	59	47	43
5	32	34	33	31	33	37	49	36	73	60	46	44
6	32	33	33	31	34	36	61	37	80	61	46	45
7	32	32	32	31	34	35	48	37	78	60	46	45
8	32	34	32	31	34	35	42	39	76	60	45	44
9	32	35	32	31	34	35	41	40	71	57	45	43
10	33	34	32	31	34	36	40	40	74	57	44	44
11	34	33	33	31	34	36	39	40	88	56	44	43
12	34	33	33	31	34	36	39	39	87	54	43	43
13	34	34	32	31	34	36	39	39	93	52	44	43
14	33	34	32	32	34	36	39	39	103	50	43	43
15	33	34	31	32	34	36	39	36	94	50	43	43
16	33	35	31	32	34	36	38	36	70	49	42	43
17	33	34	32	32	33	36	38	37	73	48	43	42
18	33	34	32	32	33	36	38	38	78	47	43	42
19	33	33	32	33	34	36	39	37	e73	47	43	42
20	33	33	31	33	34	36	38	37	68	47	44	42
21	33	34	31	33	34	36	37	38	71	43	44	42
22	33	34	31	33	33	37	37	37	67	42	44	41
23	32	34	31	33	33	37	36	37	64	42	44	41
24	33	33	31	33	33	38	36	38	63	42	44	40
25	33	35	31	33	33	38	36	38	63	42	44	40
26	33	35	31	33	33	38	36	41	61	42	43	41
27	33	33	30	33	32	38	37	41	62	42	43	40
28	33	33	30	33	33	38	39	40	61	45	44	40
29	33	33	31	33	---	39	38	40	67	46	44	40
30	33	33	31	33	---	39	37	40	65	46	44	40
31	33	---	31	33	---	39	---	41	---	49	43	---
TOTAL	1016	1011	981	993	937	1129	1202	1189	2096	1563	1377	1268
MEAN	32.8	33.7	31.6	32.0	33.5	36.4	40.1	38.4	69.9	50.4	44.4	42.3
MAX	34	35	33	33	34	39	61	41	103	61	50	45
MIN	32	32	30	31	32	32	36	36	40	42	42	40
AC-FT	2020	2010	1950	1970	1860	2240	2380	2360	4160	3100	2730	2520

CAL YR 1990 TOTAL 13549 MEAN 37.1 MAX 57 MIN 30 AC-FT 26870
WTR YR 1991 TOTAL 14762 MEAN 40.4 MAX 103 MIN 30 AC-FT 29280

e Estimated.

10265160 LITTLE HOT CREEK BELOW HOT SPRINGS, NEAR MAMMOTH LAKES, CA

LOCATION.--Lat 37°41'25", long 118°50'29", in SW 1/4 NW 1/4 sec.13, T.3 S., R.28 E., Mono County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 3.6 mi upstream from Owens River, 4.5 mi north of Whitmore Hot Springs, and 7.3 mi northeast of Mammoth Lakes.

DRAINAGE AREA.--6.37 mi².

PERIOD OF RECORD.--January 1990 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,990 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. No storage or diversion upstream from station. Most of the water originates from hot springs 300 ft upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 0.82 ft³/s, July 30, 1991, gage height, 0.61 ft; minimum daily, 0.34 ft³/s, May 15, 16, 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 30	1845	*0.82	*0.61				

Minimum daily, 0.34 ft³/s, May 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
DAILY MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	.44	.44	.42	.42	.42	.42	.44	.38
2	---	---	---	---	.44	.44	.42	.42	.42	.41	.44	.38
3	---	---	---	---	.45	.44	.43	.42	.42	.42	.44	.39
4	---	---	---	---	.45	.45	.44	.42	.42	.42	.44	.39
5	---	---	---	---	.45	.44	.44	.42	.42	.42	.44	.38
6	---	---	---	---	.46	.44	.44	.42	.42	.42	.44	.38
7	---	---	---	---	.45	.42	.44	.42	.42	.42	.44	.38
8	---	---	---	---	.46	.42	.44	.42	.42	.42	.44	.39
9	---	---	---	---	.46	.42	.43	.42	.44	.42	.44	.39
10	---	---	---	---	.46	.43	.43	.43	.44	.42	.43	.39
11	---	---	---	---	.47	.42	.44	.42	.43	.42	.42	.40
12	---	---	---	.43	.47	.42	.44	.42	e.43	.43	.42	.42
13	---	---	---	.47	.47	.42	.44	.42	e.42	.44	.42	.42
14	---	---	---	.44	.47	.42	.44	.42	e.41	.43	.42	.41
15	---	---	---	.44	.47	.42	.44	.42	e.40	.43	.42	.42
16	---	---	---	.44	.49	.42	.44	.42	.39	.43	.42	.42
17	---	---	---	.44	.49	.42	.45	.43	.39	.43	.42	.42
18	---	---	---	.44	.49	.42	.44	.43	.40	.43	.43	.42
19	---	---	---	.44	.47	.42	.44	.44	.39	.42	.43	.42
20	---	---	---	.43	.47	.42	.44	.43	.40	.43	.42	.41
21	---	---	---	.43	.46	.42	.42	.43	.41	.43	.42	.42
22	---	---	---	.44	.44	.42	.42	.41	.41	.44	.42	.42
23	---	---	---	.44	.44	.42	.43	e.41	.41	.44	.41	.41
24	---	---	---	.43	.44	.42	.42	e.42	.42	.44	.41	.40
25	---	---	---	.44	.44	.42	.42	.42	.42	.44	.41	.40
26	---	---	---	.44	.44	.42	.40	.42	.42	.44	.41	.40
27	---	---	---	.44	.44	.42	.40	.43	.43	.44	.41	.40
28	---	---	---	.44	.44	.42	.40	.42	.43	.45	.41	.40
29	---	---	---	.44	---	.42	.40	.42	.43	.45	.38	.39
30	---	---	---	.45	---	.42	.41	.42	.43	.43	.38	.40
31	---	---	---	.45	---	.42	---	.42	---	.44	.38	---
TOTAL	---	---	---	---	12.82	13.16	12.86	13.08	12.51	13.32	13.05	12.05
MEAN	---	---	---	---	.46	.42	.43	.42	.42	.43	.42	.40
MAX	---	---	---	---	.49	.45	.45	.44	.44	.45	.44	.42
MIN	---	---	---	---	.44	.42	.40	.41	.39	.41	.38	.38
AC-FT	---	---	---	---	25	26	26	26	25	26	26	24

e Estimated.

10265160 LITTLE HOT CREEK BELOW HOT SPRINGS, NEAR MAMMOTH LAKES, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.42	.42	.41	.40	.48	.45	.42	.36	.40	.42	.46
2	.40	.42	.42	.42	.40	.44	.44	.42	.38	.40	.42	.46
3	.40	.42	.42	.42	.40	.47	.44	.40	.39	.41	.42	.44
4	.40	.42	.42	.43	.40	.54	.46	.39	.39	.41	.42	.44
5	.41	.42	.42	.43	.40	.46	.46	.39	.38	.41	.43	.44
6	.41	.42	.42	.42	.39	.44	.46	.40	.39	.41	.43	.45
7	.42	.42	.42	.42	.38	.44	.47	.40	.39	.42	.42	.44
8	.41	.42	.42	.42	.38	.44	.47	.36	.39	.42	.42	.43
9	.41	.42	.44	.42	.38	.44	.47	.36	.39	.41	.42	.43
10	.42	.42	.44	.42	.38	.45	.47	.36	.39	.41	.43	.43
11	.42	.42	.44	.42	.38	.45	.48	.36	.39	.41	.42	.42
12	.42	.42	.44	.42	.38	.44	.48	.36	.39	.41	.42	.42
13	.42	.42	.44	.42	.39	.45	.48	.35	.39	.41	.43	.42
14	.42	.42	.44	.42	.40	.45	.48	.35	.40	.42	.45	.43
15	.42	.42	.44	.42	.40	.44	.48	.34	.40	.42	.44	.43
16	.42	.42	.44	.42	.40	.42	.49	.34	.39	.42	.44	.44
17	.42	.42	e .44	.42	.40	.42	.49	.35	.40	.42	.44	.44
18	.42	.42	e .44	.42	.40	.45	.47	.35	.40	.42	.44	.44
19	.41	.42	e .44	.42	.40	.45	.47	.35	.40	.42	.45	.44
20	.40	.42	.45	.42	.41	.44	.47	.36	.40	.42	.45	.44
21	.40	.41	.44	.42	.42	.43	.47	.36	.40	.41	.44	.44
22	.40	.42	.44	.42	.42	.42	.47	.35	.40	.41	.44	.44
23	.40	.42	.44	.40	.42	.43	.42	.35	.40	.41	.44	.44
24	.40	.42	.43	.40	.42	.44	.42	.36	.40	.41	.45	.45
25	.40	.42	.43	.40	.42	.47	.42	.35	.40	.40	.45	.46
26	.40	.42	.43	.40	.44	.46	.42	.36	.40	.40	.45	.46
27	.41	.42	.43	.40	.44	.45	.42	.36	.41	.40	.45	.46
28	.42	.42	.44	.40	.46	.44	.40	.36	.40	.40	.45	.46
29	.42	.42	.44	.40	---	.44	.41	.36	.40	.40	.45	.46
30	.42	.42	.44	.40	---	.44	.42	.36	.40	.41	.45	.45
31	.42	---	.43	.40	---	.44	---	.36	---	.44	.46	---
TOTAL	12.74	12.59	13.44	12.85	11.31	13.87	13.65	11.34	11.82	12.76	13.54	13.26
MEAN	.41	.42	.43	.41	.40	.45	.45	.37	.39	.41	.44	.44
MAX	.42	.42	.45	.43	.46	.54	.49	.42	.41	.44	.46	.46
MIN	.40	.41	.42	.40	.38	.42	.40	.34	.36	.40	.42	.42
AC-FT	25	25	27	25	22	28	27	22	23	25	27	26

WTR YR 1991 TOTAL 153.17 MEAN .42 MAX .54 MIN .34 AC-FT 304

e Estimated.

10268225 MCGEE CREEK DIVERSION NEAR BISHOP, CA

LOCATION.--Lat 37°16'32", long 118°37'09", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 5 ft downstream from outlet of diversion pipe, 80 ft upstream from tributary to Birch Creek, and 13.5 mi southwest of Bishop.

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Cipolletti weir. Elevation of gage is 8,630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow limited by size of diversion pipe from McGee Creek. Water flows down Birch Creek and then is diverted to Bishop Creek powerplant No. 2 conduit via Birch-McGee Creek Diversion (station 10270900).

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 9.7 ft³/s, June 15, 1991; minimum daily, 0.46 ft³/s, Mar. 2, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.3	.96	.65	.53	.49	.52	1.3	4.5	4.3	6.7	3.9
2	1.9	1.0	.99	.67	.62	.46	.52	1.3	5.0	4.3	6.6	4.2
3	1.9	1.1	1.1	.73	.66	.82	.57	1.3	6.3	4.4	6.5	4.1
4	1.9	1.2	.98	.82	.70	1.1	.78	1.3	8.0	5.0	6.4	4.0
5	1.8	1.1	.80	.84	.64	1.4	.86	1.5	8.7	8.9	6.3	3.9
6	1.8	1.0	.81	.76	.61	.99	.87	1.7	9.2	9.4	6.0	4.4
7	1.8	e1.0	.78	.69	.62	1.0	.79	1.9	9.3	9.0	5.9	4.5
8	1.7	1.1	.80	.67	.60	.83	.78	2.3	9.3	8.6	5.6	4.4
9	1.7	1.0	.74	.74	.58	.82	.78	2.2	9.4	8.4	5.5	3.9
10	1.7	1.0	.70	.74	.52	.74	.74	2.2	9.4	8.0	5.3	3.6
11	1.7	1.0	.74	.74	.52	.74	.72	2.1	9.6	7.6	5.2	3.5
12	1.7	1.1	.72	.64	.52	.74	.73	2.3	9.5	7.6	5.0	3.2
13	1.7	1.1	.57	.64	.52	.74	.76	2.3	9.4	8.1	5.0	3.0
14	1.7	1.1	.71	.64	.52	.74	.79	2.2	9.6	8.8	5.0	3.0
15	1.6	1.1	.70	.64	.52	.83	.76	2.4	9.7	8.9	5.0	3.0
16	1.5	1.1	.71	.62	.52	.84	.76	2.5	9.5	8.1	5.0	3.0
17	1.5	1.1	.70	.64	.55	.91	.80	2.3	9.6	7.4	5.0	3.1
18	1.5	1.0	.72	.64	e.50	.95	1.0	2.2	9.4	7.3	5.0	3.0
19	1.5	e1.0	.75	.64	.48	.91	1.0	2.2	9.2	7.2	5.1	3.4
20	1.6	.94	.74	.66	.49	.95	1.1	2.3	9.2	7.0	5.3	5.5
21	1.7	.99	e.74	.64	.50	.95	1.1	2.2	9.0	6.7	5.1	7.9
22	1.6	1.0	e.74	e.63	.57	.95	1.1	2.2	8.7	6.6	5.0	8.2
23	1.5	1.0	e.74	.63	.52	.95	1.2	2.6	8.5	6.6	5.0	7.8
24	1.5	.95	e.70	.52	.49	.91	1.1	3.0	6.8	6.6	5.0	7.7
25	1.5	.87	e.64	.60	.48	.74	1.1	3.6	4.9	6.6	4.9	7.6
26	1.4	1.0	e.64	.58	.54	.74	1.2	4.0	4.8	6.6	4.8	7.3
27	1.4	1.0	e.68	e.58	.58	.66	1.1	4.4	4.5	6.7	4.5	7.2
28	1.4	.95	.76	e.58	.60	.64	1.2	4.7	4.3	6.7	4.0	7.0
29	1.4	1.1	.74	e.60	---	.64	1.3	4.8	4.2	6.5	3.9	7.0
30	1.4	.99	.84	.64	---	.64	1.3	4.7	4.2	6.3	4.0	6.8
31	1.3	---	.77	.54	---	.64	---	4.6	---	6.5	3.9	---
TOTAL	50.2	31.19	23.71	20.35	15.50	25.46	27.33	80.6	233.7	220.7	161.5	149.1
MEAN	1.62	1.04	.76	.66	.55	.82	.91	2.60	7.79	7.12	5.21	4.97
MAX	1.9	1.3	1.1	.84	.70	1.4	1.3	4.8	9.7	9.4	6.7	8.2
MIN	1.3	.87	.57	.52	.48	.46	.52	1.3	4.2	4.3	3.9	3.0
AC-FT	100	62	47	40	31	50	54	160	464	438	320	296

WTR YR 1991 TOTAL 1039.34 MEAN 2.85 MAX 9.7 MIN .46 AC-FT 2060

e Estimated.

10270680 GREEN CREEK CONDUIT OUTLET NEAR BISHOP, CA

LOCATION.--Lat 37°10'07", long 118°33'53", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank 75 ft downstream from outlet of diversion pipe, 0.1 mi upstream from South Lake, and 16.2 mi southwest of Bishop.

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 9,800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow limited by size of diversion pipe from Green Creek. Water is used for power development downstream from South lake.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3.7 ft³/s, June 15, 1991, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.67	.33	.04
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.33	.05
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.5	.33	.06
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.5	.31	.10
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.8	.30	.12
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.7	.30	.20
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.9	.27	.24
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5	.25	.23
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.20	.19
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.20	.18
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.89	.18	.18
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.79	.18	.18
13	.00	.00	.00	.00	.00	.00	.00	.00	.20	.66	.22	.18
14	.00	.00	.00	.00	.00	.00	.00	.00	2.6	.63	.26	.15
15	.00	.00	.00	.00	.00	.00	.00	.00	3.7	.57	.23	.13
16	.00	.00	.00	.00	.00	.00	.00	.00	3.4	.52	.19	.13
17	.00	.00	.00	.00	.00	.00	.00	.00	3.1	.49	.18	.12
18	.00	.00	.00	.00	.00	.00	.00	.00	2.1	.49	.18	.11
19	.00	.00	.00	.00	.00	.00	.00	.00	1.6	.46	.18	.11
20	.00	.00	.00	.00	.00	.00	.00	.00	1.4	.45	.14	.11
21	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.43	.14	.11
22	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.40	.14	.08
23	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.35	.13	.03
24	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.33	.09	.03
25	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.33	.07	.04
26	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.33	.07	.07
27	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.32	.04	.03
28	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.32	.05	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.79	.33	.04	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.65	.31	.04	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.31	.03	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.74	27.78	5.60	3.20
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.96	.90	.18	.11
MAX	.00	.00	.00	.00	.00	.00	.00	.00	3.7	2.8	.33	.24
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.31	.03	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	57	55	11	6.3

WTR YR 1991 TOTAL 65.32 MEAN .18 MAX 3.7 MIN .00 AC-FT 130

10270700 SOUTH LAKE NEAR BISHOP, CA

LOCATION.--Lat 37°10'21", long 118°33'52", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, near spillway at right abutment of Hillside Dam on South Fork Bishop Creek and 16.0 mi southwest of Bishop.

DRAINAGE AREA.--12.9 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1910. Usable capacity, 12,883 acre-ft between elevations 9,621.20 ft, invert of outlet tunnel, and 9,751.31 ft, crest of spillway. Water is received from Green Creek via Green Creek Conduit (station 10270680). Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 11,159 acre-ft, Aug. 19, 1991, elevation, 9,741.09 ft; minimum, 2,929 acre-ft, May 22, 1991, elevation, 9,671.39 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 5, 1981)

9,621.2	0	9,690	4,532
9,630	416	9,710	6,653
9,650	1,493	9,730	9,392
9,670	2,819	9,756	13,704

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4968	4664	4264	3867	3669	3468	3523	3217	3773	8227	10913	10655
2	4969	4657	4233	3858	3659	3466	3520	3189	3900	8377	10967	10600
3	4972	4648	4224	3845	3651	3475	3519	3148	4067	8557	11001	10565
4	4973	4638	4212	3844	3641	3496	3521	3115	4252	8756	11026	10547
5	4967	4619	4196	3842	3632	3500	3521	3096	4439	8957	11046	10531
6	4956	4605	4183	3836	3623	3510	3518	3088	4607	9168	11065	10515
7	4938	4591	4171	3829	3614	3516	3512	3088	4775	9337	11077	10505
8	4929	4583	4159	3819	3605	3522	3511	3087	4946	9482	11087	10492
9	4925	4573	4147	3810	3596	3527	3507	3089	5133	9600	11093	10465
10	4920	4558	4132	3807	3591	3526	3501	3084	5340	9718	11103	10459
11	4913	4547	e4115	3801	3582	3526	3497	3066	5569	9826	11110	10465
12	4905	4529	e4098	3799	3575	3527	3497	3042	5830	9933	11110	10459
13	4899	e4515	e4093	3794	3568	3522	3497	3023	6074	10028	11119	10448
14	4889	e4500	e4081	3787	3565	3521	3495	3002	6297	10121	11124	10432
15	4880	e4486	e4068	3779	3558	3521	3487	2989	6505	10200	11131	10408
16	4868	4472	e4051	3768	3548	3523	3483	2979	6696	10269	11142	10384
17	4857	4457	e4033	3764	3536	3526	3472	2973	6866	10337	11151	10368
18	4843	4441	e4022	3759	3528	3537	3466	2965	6994	10398	11152	10345
19	4828	4424	e4012	3752	3523	3538	3463	2944	7120	10451	11152	10297
20	4816	4409	e4000	3743	3520	3539	3460	2937	7226	10504	11146	10259
21	4811	4394	e3988	3733	3515	3529	3454	2931	7336	10549	11131	10218
22	4803	4385	e3974	3727	3504	3539	3447	2934	7437	10587	11121	10172
23	4793	4374	3963	3725	3493	3535	3442	2971	7534	10628	11088	10139
24	4783	4367	3950	3721	3486	3531	3437	3040	7635	10665	11060	10090
25	4777	e4358	3939	3713	3480	3528	3417	3152	7734	10700	11018	10030
26	4757	4334	3929	3704	3475	3530	3392	3265	7822	10725	10977	9957
27	4746	4326	3921	3697	3467	3528	3366	3352	7910	10751	10921	9881
28	4734	4317	3911	3691	3463	3528	e3328	3451	7977	10772	10881	9809
29	4716	4305	3901	3686	---	3531	3284	3541	8038	10798	10820	9735
30	4702	4287	3889	3680	---	3531	3249	3617	8125	10824	10762	9669
31	4686	---	3878	3675	---	3531	---	3685	---	10851	10704	---
MAX	4973	4664	4264	3867	3669	3539	3523	3685	8125	10851	11152	10655
MIN	4686	4287	3878	3675	3463	3466	3249	2931	3773	8227	10704	9669
a	9691.57	9687.42	9682.87	9680.51	9677.97	9678.79	9675.38	9680.62	9721.51	9739.21	9738.30	9731.79
b	-286	-399	-409	-203	-212	+68	-282	+436	+4440	+2726	-147	-1035

WTR YR 1991 MAX 11152 MIN 2931 b +4697

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10270800 SOUTH FORK BISHOP CREEK BELOW SOUTH LAKE, NEAR BISHOP, CA

LOCATION.--Lat 37°10'38", long 118°33'44", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank near weir on Weir Lake, 0.3 mi downstream from South Lake, and 15.7 mi southwest of Bishop.

DRAINAGE AREA.--13.4 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 9,580 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated by South Lake (station 10270700). Green Creek Conduit (station 10270680) diverts water into basin at South Lake. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45 ft³/s, Sept. 28, 30, 1991, gage height, 0.67 ft; minimum daily, 6.8 ft³/s, Apr. 9, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	10	9.4	7.5	8.1	7.5	24	8.1	8.7	11	36
2	9.6	11	10	8.9	7.5	8.1	7.5	24	8.2	9.1	12	35
3	9.2	11	11	7.8	7.5	8.7	7.5	28	8.3	9.4	12	30
4	8.0	10	11	7.5	7.8	8.7	7.5	24	8.2	9.4	12	22
5	9.2	11	11	7.5	7.5	8.1	7.5	23	7.5	9.3	12	22
6	9.4	11	11	7.5	7.5	8.1	7.5	20	7.5	8.7	12	22
7	10	11	11	7.5	7.5	8.1	7.5	20	7.5	8.7	12	22
8	10	11	10	7.5	7.5	8.1	7.5	20	7.5	8.7	12	22
9	11	11	9.7	7.5	7.5	8.1	6.8	21	7.5	8.8	12	22
10	11	11	9.2	7.5	7.5	8.1	7.1	23	7.5	8.7	12	15
11	11	11	9.1	7.5	7.5	8.1	6.9	26	7.5	8.7	16	9.5
12	11	11	10	7.5	7.5	8.1	6.9	27	7.5	8.7	16	15
13	11	11	10	7.5	7.5	8.1	6.9	27	7.5	8.7	16	18
14	11	11	10	7.5	7.5	8.1	6.9	27	7.5	8.7	16	18
15	11	11	11	7.5	7.5	8.1	6.9	27	7.5	8.7	17	18
16	11	10	11	7.5	7.5	8.1	6.9	27	7.5	8.7	17	18
17	11	10	10	7.0	7.5	8.1	9.3	27	7.5	8.7	16	18
18	11	10	9.1	7.2	7.5	7.9	10	27	7.5	8.7	16	20
19	11	10	9.2	7.5	7.5	7.5	9.4	27	7.5	8.7	17	29
20	12	11	9.8	7.5	7.5	7.5	9.4	23	7.5	8.7	20	28
21	12	11	10	7.5	6.9	7.4	8.9	22	7.5	8.7	20	27
22	12	10	10	7.5	6.9	6.9	8.7	22	7.5	8.7	19	27
23	11	10	10	7.5	6.9	6.9	8.7	21	7.5	8.7	28	26
24	11	9.3	10	7.5	6.9	6.9	8.8	19	7.5	8.7	33	26
25	11	9.5	9.7	7.5	7.5	6.9	15	10	7.5	9.6	33	36
26	11	11	9.4	7.5	7.5	6.9	20	7.5	7.5	12	33	42
27	11	11	9.4	7.5	7.5	6.9	19	8.5	8.3	13	33	43
28	12	11	9.6	7.5	8.1	7.1	20	9.5	8.5	12	35	42
29	11	10	9.4	7.5	---	7.5	20	8.1	8.1	12	40	39
30	11	10	9.4	7.5	---	7.5	22	8.1	8.4	12	39	44
31	12	---	9.4	7.5	---	7.5	---	8.1	---	11	36	---
TOTAL	335.4	317.8	309.4	235.3	208.5	240.2	304.5	635.8	231.1	292.9	635	791.5
MEAN	10.8	10.6	9.98	7.59	7.45	7.75	10.1	20.5	7.70	9.45	20.5	26.4
MAX	12	11	11	9.4	8.1	8.7	22	28	8.5	13	40	44
MIN	8.0	9.3	9.1	7.0	6.9	6.9	6.8	7.5	7.5	8.7	11	9.5
AC-FT	665	630	614	467	414	476	604	1260	458	581	1260	1570

WTR YR 1991 TOTAL 4537.4 MEAN 12.4 MAX 44 MIN 6.8 AC-FT 9000

OWENS LAKE BASIN

10270870 LAKE SABRINA NEAR BISHOP, CA

LOCATION.--Lat 38°12'44", long 118°36'42", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in valve house at base of dam on Middle Fork Bishop Creek and 15.8 mi southwest of Bishop.

DRAINAGE AREA.--16.5 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1908. Usable capacity, 7,350 acre-ft between elevations 9,068.42 ft, invert of outlet, and 9,131.62 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,254 acre-ft, July 15, 1991, elevation, 9,131.13 ft; minimum, 598 acre-ft, May 6, 1991, elevation, 9,090.33 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 12, 1981)

9,068.42	0	9,100	1,926
9,070	1	9,110	3,501
9,080	15	9,120	5,196
9,090	558	9,135	7,817

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2633	2446	2146	1706	1500	1363	1683	723	1474	6008	7050	6455
2	2634	2439	2134	1696	1494	1360	1679	688	1595	6114	7098	6440
3	2634	2435	2128	1692	1491	1374	1673	657	1762	6266	7127	6419
4	2633	2427	2116	1690	1484	1414	1667	628	1959	6455	7140	e6389
5	2631	2415	2103	1685	1477	1423	1666	606	2175	6668	7140	6367
6	2622	2407	2094	1680	1470	1440	1664	598	2362	6848	7123	6378
7	2614	2390	2085	1673	1464	1454	1663	609	2546	6978	7092	6414
8	2608	2382	2072	1658	1458	1470	1663	646	2729	7080	7051	6436
9	2600	2373	2061	1654	1451	1487	1636	667	2924	7131	7003	6438
10	2597	2362	2054	1647	1444	1498	1593	677	3148	7163	6961	6425
11	2594	2353	2043	1642	1438	1508	1546	678	3408	7196	6932	6395
12	2594	2344	2030	1636	1433	1515	1492	677	3696	7215	6888	6365
13	2590	2337	2019	1631	1427	1523	1441	673	3952	7235	6869	6335
14	2581	2328	2009	1622	1423	1527	1393	666	4196	7252	6850	6305
15	2573	2316	1989	1615	1416	1537	1339	671	4419	7243	6827	6270
16	2564	2307	1962	1609	1408	1551	1283	695	4627	7212	6800	6225
17	2562	2297	1950	1602	1403	1563	1230	718	4811	7169	6775	6185
18	2561	2283	1935	1596	1397	1589	1179	722	4956	7127	6750	6142
19	2557	2276	1922	1589	1391	1599	1127	722	5079	7084	6724	6112
20	2550	2265	e1901	1583	1384	1606	1079	724	5186	7032	6695	6092
21	2542	2253	e1879	1577	1379	1613	1031	732	5288	6986	6663	6061
22	e2535	2243	e1856	1572	1372	1619	983	739	5386	6950	6617	6037
23	e2528	2234	e1836	1566	1366	1623	938	779	5489	6942	6589	6010
24	e2518	2223	e1824	1559	1360	1625	895	858	5585	6944	6576	5982
25	2514	2213	e1796	1551	1355	1645	852	959	5674	6952	6564	5964
26	2503	2204	e1774	1548	1347	1651	827	1054	5757	6948	6549	5964
27	2495	2193	1759	1541	1345	1663	806	1140	5826	6952	6532	5964
28	2486	2184	1752	1536	1346	1669	785	1217	5882	6959	6513	5960
29	2477	2173	1740	1527	---	1673	762	1303	5924	6967	6500	5958
30	2469	2163	1728	1523	---	1677	747	1366	5958	6963	6492	5955
31	2456	---	1718	1510	---	1680	---	1417	---	6976	6477	---
MAX	2634	2446	2146	1706	1500	1680	1683	1417	5958	7252	7140	6455
MIN	2456	2163	1718	1510	1345	1360	747	598	1474	6008	6477	5955
a	9103.48	9101.57	9098.59	9097.15	9096.00	9098.33	9091.54	9096.50	9124.27	9129.69	9127.07	9124.25
b	-177	-293	-445	-208	-164	+334	-933	+670	+4541	+1018	-499	-522

WTR YR 1991 MAX 7252 MIN 598 b +3322

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10270872 MIDDLE FORK BISHOP CREEK BELOW LAKE SABRINA, NEAR BISHOP, CA

LOCATION.--Lat 37°12'50", long 118°36'34", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank 800 ft downstream from Lake Sabrina Dam and 15.6 mi southwest of Bishop.

DRAINAGE AREA.--16.7 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 9,050 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated by Lake Sabrina (station 10270870). Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75 ft³/s, July 15, 16, 1991, gage height, 0.92 ft; minimum daily, 6.5 ft³/s, Mar. 19-27, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	9.8	10	9.7	7.6	7.1	9.2	25	20	27	35	26
2	14	9.8	10	9.3	7.3	7.1	12	29	11	17	35	26
3	13	9.8	10	7.1	7.1	7.1	12	27	7.6	15	35	27
4	14	9.8	9.9	7.1	7.1	7.1	11	27	7.6	14	35	34
5	14	9.5	9.4	7.1	7.1	7.1	11	26	7.6	19	39	33
6	14	9.2	9.4	7.1	7.1	7.1	9.0	25	7.6	35	42	27
7	14	13	9.4	7.6	7.1	7.1	8.2	21	7.6	42	45	20
8	14	e9.1	9.4	7.6	7.1	7.1	8.2	19	7.6	52	48	26
9	13	9.4	9.4	7.6	7.1	7.1	20	16	7.6	57	45	31
10	11	9.4	9.4	7.6	7.1	7.1	30	16	8.1	64	45	36
11	9.8	9.4	9.2	7.6	7.1	7.1	32	18	8.2	64	45	41
12	9.2	9.4	8.8	7.6	7.1	7.1	33	18	8.6	64	42	37
13	10	9.4	8.8	7.6	7.1	7.1	33	19	8.8	64	40	34
14	14	9.4	8.8	7.4	7.1	7.1	33	21	8.2	66	36	33
15	13	9.4	14	7.6	7.1	7.1	33	18	7.6	71	40	36
16	12	9.4	15	7.6	7.1	7.1	35	19	7.7	73	40	36
17	9.8	9.7	12	7.2	7.1	7.1	33	19	8.2	74	40	35
18	9.1	10	11	7.4	7.1	7.1	32	20	8.2	74	40	36
19	9.1	10	11	7.6	6.8	6.5	33	20	8.6	72	39	29
20	11	10	14	7.6	7.1	6.5	33	18	9.1	70	39	24
21	11	10	17	7.6	7.1	6.5	32	18	10	66	39	29
22	11	11	17	7.6	7.1	6.5	32	19	12	56	43	25
23	10	10	15	7.6	7.1	6.5	32	19	12	41	34	24
24	10	9.7	13	7.6	7.1	6.5	32	16	13	34	26	25
25	11	9.3	13	7.6	7.1	6.5	28	15	15	36	26	19
26	12	9.4	14	7.6	7.1	6.5	21	9.1	17	38	26	10
27	12	9.4	12	7.6	7.1	6.5	21	11	22	36	26	12
28	12	9.4	9.8	7.6	7.1	6.7	21	12	21	34	29	12
29	12	9.4	10	7.6	---	7.1	21	12	24	36	22	12
30	12	9.7	10	7.6	---	7.1	22	13	27	40	19	12
31	11	---	9.7	7.6	---	7.1	---	14	---	36	22	---
TOTAL	367.0	292.2	349.4	236.6	199.2	214.3	722.6	579.1	348.5	1487	1117	807
MEAN	11.8	9.74	11.3	7.63	7.11	6.91	24.1	18.7	11.6	48.0	36.0	26.9
MAX	15	13	17	9.7	7.6	7.1	35	29	27	74	48	41
MIN	9.1	9.1	8.8	7.1	6.8	6.5	8.2	9.1	7.6	14	19	10
AC-FT	728	580	693	469	395	425	1430	1150	691	2950	2220	1600

WTR YR 1991 TOTAL 6719.9 MEAN 18.4 MAX 74 MIN 6.5 AC-FT 13330

e Estimated.

10270875 INTAKE NO. 2 RESERVOIR NEAR BISHOP, CA

LOCATION.--Lat 38°14'53", long 118°34'53", in SE 1/4 SW 1/4 sec.16, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in outlet structure 50 ft upstream from Bishop Creek dam on Middle Fork Bishop Creek and 13.0 mi southwest of Bishop.

DRAINAGE AREA.--31.6 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed by rock-fill dam completed in 1908. Capacity, 78 acre-ft between elevations 8,077 ft, invert of outlet, and 8,098.81 ft, crest of spillway, all of which is available for release. Water is received from South Fork Bishop Creek via conduit on right bank. Most of the water is diverted through conduit to Bishop Creek powerplant No. 2 for power development on Bishop Creek. Figures given represent total contents.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 92 acre-ft, June 13, 1991, elevation, 8,099.98 ft; minimum, 59 acre-ft, Dec. 15, 1990, elevation, 8,097.11 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 12, 1981)

8,077	0	8,094	32
8,082	1	8,098	68
8,086	5	8,102	120
8,090	12		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	75	73	75	74	78	78	83	87	86	81	71
2	70	75	72	74	74	77	76	84	88	85	80	73
3	70	72	73	73	74	76	73	84	90	86	80	70
4	68	71	73	73	75	80	74	83	90	86	80	71
5	68	71	74	72	74	76	80	84	90	87	81	72
6	69	69	73	73	74	73	79	87	89	88	80	77
7	70	71	73	74	73	68	79	89	89	88	81	71
8	71	71	74	75	73	68	78	89	89	89	81	70
9	74	71	73	76	72	67	81	88	89	89	75	71
10	74	71	73	75	72	68	81	88	90	89	71	71
11	71	71	75	75	71	68	81	88	91	88	73	69
12	67	71	73	76	72	68	81	88	91	88	74	70
13	65	71	70	76	70	67	81	89	91	88	80	71
14	69	71	62	76	72	68	82	89	87	88	74	69
15	72	72	67	76	74	68	82	89	87	89	75	72
16	74	71	73	75	76	68	82	89	86	88	73	71
17	71	71	75	75	76	68	82	88	86	88	70	68
18	70	72	73	74	76	72	82	88	85	88	70	67
19	67	72	67	74	75	72	82	89	85	88	69	70
20	69	73	64	74	75	71	81	88	84	88	73	67
21	71	71	67	73	75	71	81	87	85	87	69	71
22	73	70	71	73	75	70	81	88	85	86	70	71
23	71	70	75	72	75	70	82	88	85	80	71	69
24	70	69	63	72	74	70	82	88	85	80	72	67
25	68	68	62	73	74	71	82	88	85	82	70	73
26	68	68	63	73	75	72	82	87	85	82	70	67
27	69	68	65	74	75	74	82	87	85	80	66	68
28	71	66	68	74	77	73	82	87	85	80	70	71
29	72	69	70	74	---	74	82	87	85	81	73	67
30	74	70	72	74	---	75	84	86	85	81	71	70
31	76	---	73	74	---	77	---	86	---	81	67	---
MAX	76	75	75	76	77	80	84	89	91	89	81	77
MIN	65	66	62	72	70	67	73	83	84	80	66	67
a	8098.65	8098.17	8098.44	8098.49	8098.78	8098.74	8099.31	8099.54	8099.41	8099.08	8097.93	8098.17
b	+6	-6	+3	+1	+3	0	+7	+2	-1	-4	-14	+3

WTR YR 1991 MAX 91 MIN 62 b 0

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10270877 MIDDLE FORK BISHOP CREEK BELOW INTAKE NO. 2 RESERVOIR, NEAR BISHOP, CA

LOCATION.--Lat 37°15'16", long 118°34'39", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 0.1 mi upstream from bridge on South Lake road, 0.7 mi downstream from Bishop Creek Dam, 0.9 mi upstream from confluence with South Fork Bishop Creek, and 12.6 mi southwest of Bishop.

DRAINAGE AREA.--31.9 mi².

PERIOD OF RECORD.--October 1990 to September 1991 (low-flow records only). Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 7,830 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No records computed above 30 ft³/s. Flow regulated by Intake No. 2 Reservoir (station 10270875), where most of the water is diverted to Bishop Creek powerplant No. 2. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.8	2.7	28	2.3	2.7	2.4	---	---	---	17	3.5
2	2.7	2.8	2.8	28	2.4	2.3	2.5	---	---	---	16	3.5
3	2.7	2.8	2.8	26	2.5	2.3	2.2	---	---	---	15	3.5
4	2.7	2.8	2.9	18	2.5	12	2.2	---	---	---	15	3.5
5	2.7	2.7	2.8	6.0	2.5	4.9	22	---	---	---	15	3.5
6	2.8	2.7	2.8	6.1	2.5	e2.3	25	---	---	---	15	3.6
7	2.8	2.7	2.8	6.1	2.5	e2.3	6.0	---	---	---	12	3.6
8	2.8	2.7	2.8	6.1	2.5	e2.4	5.0	---	---	---	15	3.6
9	2.8	2.7	2.8	4.2	2.5	2.4	6.8	---	---	---	13	3.6
10	2.8	2.7	2.8	2.9	2.5	2.4	18	---	---	---	5.2	3.5
11	2.8	2.7	2.8	2.9	2.5	2.4	19	---	---	---	3.5	3.5
12	2.8	2.7	2.8	2.9	2.5	2.4	20	---	---	---	3.0	3.5
13	2.8	2.7	e2.7	3.0	2.5	2.3	20	---	---	---	4.1	3.5
14	2.7	2.6	e2.7	2.8	2.5	e2.3	21	---	---	---	4.4	3.4
15	2.7	2.7	e2.7	2.6	2.5	e2.3	22	---	---	---	3.1	3.4
16	2.7	2.7	e2.8	2.6	2.5	e2.3	24	---	---	---	2.8	3.4
17	2.7	2.4	e2.9	2.6	2.6	2.4	22	---	---	---	2.9	3.3
18	2.7	1.6	e2.8	2.5	2.6	2.4	23	---	---	---	2.8	3.3
19	2.7	3.6	e2.8	2.5	2.5	2.3	22	---	---	---	2.6	3.3
20	2.7	4.3	e2.9	2.5	2.5	2.4	21	---	---	---	2.3	3.4
21	2.7	2.7	e3.3	e2.3	2.5	2.4	21	---	---	---	2.2	3.4
22	2.7	2.6	e3.5	e2.3	2.5	2.3	21	---	---	---	2.3	3.3
23	2.7	2.6	e3.6	e2.3	2.5	2.3	21	---	---	---	3.3	3.4
24	2.7	2.6	e13	2.7	2.4	2.3	22	---	---	16	4.8	3.4
25	2.7	2.6	---	e2.2	2.4	2.3	23	---	---	13	4.5	3.4
26	2.6	2.7	---	e2.3	2.4	2.3	22	---	---	---	4.4	3.5
27	2.6	2.6	---	e2.6	2.3	2.4	23	---	---	24	4.0	3.4
28	2.6	2.8	28	e2.5	2.3	e2.4	23	---	---	18	3.5	3.5
29	2.6	2.7	28	2.5	---	2.4	24	---	---	17	3.5	3.5
30	2.7	2.7	28	2.4	---	2.4	27	---	---	18	3.5	3.4
31	2.7	---	28	2.3	---	2.4	---	---	---	18	3.5	---
TOTAL	84.1	82.0	---	184.7	69.2	85.4	533.1	---	---	---	209.2	103.6
MEAN	2.71	2.73	---	5.96	2.47	2.75	17.8	---	---	---	6.75	3.45
MAX	2.8	4.3	---	28	2.6	12	27	---	---	---	17	3.6
MIN	2.6	1.6	---	2.2	2.3	2.3	2.2	---	---	---	2.2	3.3
AC-FT	167	163	---	366	137	169	1060	---	---	---	415	205

e Estimated.

10270900 BIRCH-MCGEE DIVERSION TO BISHOP CREEK POWERPLANT NO. 2 NEAR BISHOP, CA

LOCATION.--Lat 37°16'26", Long 118°34'45", NW 1/4 NE 1/4 sec.9, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in conduit 100 ft upstream from penstock to Bishop Creek powerplant No. 2 and 11.9 mi southwest of Bishop.

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Acoustic-velocity meter. Elevation of gage is 7,950 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Conduit diverts water from Birch Creek and discharges into penstock to Bishop Creek powerplant No. 2. Birch Creek receives water from McGee Creek via McGee Creek Diversion (station 10268225).

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 20 ft³/s, July 5, 6, 11, 1991; minimum daily, 2.0 ft³/s, Dec. 22, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.2	4.5	4.1	3.7	3.4	3.5	3.6	4.3	7.2	11	e14	8.0
2	e5.2	4.3	4.1	3.8	3.4	3.2	3.6	4.2	7.7	11	e13	8.2
3	5.2	4.4	4.1	3.8	3.6	3.5	3.9	4.1	8.9	13	13	8.1
4	5.0	4.4	4.1	3.9	3.6	4.2	4.2	4.6	e9.0	15	13	7.8
5	4.9	4.4	4.1	3.8	3.4	4.4	4.6	5.1	e9.0	20	12	e7.7
6	3.7	3.9	4.0	3.8	3.7	3.8	4.7	4.9	e9.0	20	11	9.6
7	3.4	4.1	4.0	3.7	3.5	3.7	4.1	3.5	e10	18	11	e9.1
8	3.3	4.5	4.0	3.6	3.3	3.7	3.9	2.9	e10	19	11	8.6
9	4.1	4.4	4.0	3.7	3.4	3.5	4.0	5.0	e10	18	11	8.0
10	5.1	4.5	4.1	3.7	3.4	3.7	3.8	5.4	e11	18	11	7.5
11	5.1	4.6	4.3	3.7	3.3	3.6	3.6	5.3	e11	20	11	7.2
12	5.0	4.5	4.3	3.7	3.4	3.5	3.6	5.5	e12	19	10	7.3
13	5.0	4.3	3.5	3.4	3.8	3.7	3.9	5.4	e13	19	e10	6.9
14	5.0	4.4	3.8	3.5	3.7	3.7	4.1	5.6	13	19	e9.9	6.8
15	4.9	4.5	3.4	3.8	3.7	3.6	4.1	5.5	13	17	e9.8	e6.6
16	4.7	4.4	3.7	3.6	3.6	3.5	4.3	5.3	14	11	9.8	e6.5
17	4.7	4.4	3.7	3.5	3.3	3.5	4.1	5.0	14	16	9.7	e6.7
18	4.7	4.3	3.9	3.6	3.3	3.6	4.3	4.8	14	14	e9.4	e6.3
19	4.6	4.6	3.8	3.7	3.5	3.6	4.1	4.9	16	16	e9.7	8.2
20	4.8	4.4	3.6	3.5	3.5	3.5	3.9	e5.0	16	14	e9.5	12
21	4.6	4.2	3.5	3.6	3.4	3.3	4.4	e5.0	15	14	9.2	12
22	4.5	4.3	2.0	3.6	3.4	3.1	4.8	5.1	16	14	9.1	12
23	4.5	4.3	3.0	3.6	3.5	3.1	5.0	5.7	16	14	e8.8	11
24	4.6	4.2	3.2	3.5	3.5	3.3	4.7	6.1	14	14	e8.5	11
25	4.7	4.2	3.3	3.6	3.5	3.2	4.3	6.2	e12	14	e8.6	11
26	4.7	3.7	3.3	3.5	3.4	3.3	4.8	6.6	e12	14	e8.6	8.9
27	4.6	3.3	3.3	3.4	3.5	3.3	4.6	6.7	11	13	e8.3	9.2
28	4.7	3.0	3.4	3.5	3.5	3.4	4.4	7.0	11	13	7.8	10
29	4.8	3.0	3.6	3.3	---	3.5	4.6	7.2	10	13	7.6	9.8
30	4.4	3.6	3.8	3.4	---	3.7	4.8	7.3	11	14	7.7	9.5
31	4.4	---	3.6	3.3	---	3.8	---	7.0	---	14	7.7	---
TOTAL	144.1	125.6	114.6	111.8	97.5	110.0	126.8	166.2	355.8	479	310.7	261.5
MEAN	4.65	4.19	3.70	3.61	3.48	3.55	4.23	5.36	11.9	15.5	10.0	8.72
MAX	5.2	4.6	4.3	3.9	3.8	4.4	5.0	7.3	16	20	14	12
MIN	3.3	3.0	2.0	3.3	3.3	3.1	3.6	2.9	7.2	11	7.6	6.3
AC-FT	286	249	227	222	193	218	252	330	706	950	616	519

WTR YR 1991 TOTAL 2403.6 MEAN 6.59 MAX 20 MIN 2.0 AC-FT 4770

e Estimated.

10270960 COYOTE CREEK NEAR BISHOP, CA

LOCATION.--Lat 37°18'54", long 118°30'33", SW 1/4 NW 1/4 sec.30, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, on left bank 30 ft upstream from mouth and 7.2 mi southwest of Bishop.

DRAINAGE AREA.--25.8 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 5,470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. No storage or diversion upstream from station. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12 ft³/s, May 6, 1991, gage height, 1.04 ft; minimum daily, 2.0 ft³/s, several days in 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.3	3.2	3.1	3.3	3.6	3.7	6.0	3.5	2.7	2.5	2.1
2	3.0	3.2	3.1	3.0	3.4	3.1	3.7	4.9	3.7	2.6	2.3	2.2
3	2.9	3.0	3.2	3.2	3.4	3.4	3.8	5.0	3.6	2.5	2.2	2.2
4	2.9	3.2	3.5	3.2	3.6	6.0	4.1	5.5	3.6	2.5	2.2	2.2
5	2.9	3.4	3.5	3.3	3.7	4.6	4.5	6.8	3.7	2.4	2.2	2.2
6	2.9	3.3	3.3	3.3	3.7	4.1	4.7	7.5	3.6	2.4	2.1	2.6
7	2.9	3.1	3.3	3.3	3.6	3.8	4.5	7.6	3.5	2.4	2.1	2.6
8	3.0	3.5	3.3	3.3	3.6	3.5	4.1	7.3	3.5	2.6	2.1	2.5
9	3.0	3.3	3.3	3.2	3.6	3.5	4.2	5.0	3.5	2.6	2.1	2.3
10	3.1	3.3	3.4	3.2	3.6	3.5	4.1	4.5	3.2	2.5	2.0	2.3
11	3.1	3.3	3.5	3.3	3.6	3.5	3.9	4.6	3.2	2.5	2.0	2.3
12	3.1	3.4	3.5	3.3	3.6	3.4	3.9	4.6	3.1	2.3	2.2	2.3
13	3.1	3.4	3.3	3.4	3.7	3.5	3.9	4.9	3.0	2.3	2.3	2.3
14	3.1	3.4	2.6	3.3	3.9	3.3	3.9	4.7	3.0	2.3	2.2	2.3
15	3.1	3.4	3.1	3.3	3.9	3.4	4.0	4.7	3.0	2.4	2.2	2.3
16	3.1	3.4	2.8	3.3	3.8	3.5	3.8	4.8	2.9	2.2	2.3	2.2
17	3.1	3.4	3.3	3.4	3.6	3.5	3.8	4.5	2.8	2.2	2.3	2.2
18	3.1	3.4	3.4	3.3	3.5	3.6	3.9	3.9	2.8	2.2	2.2	2.1
19	3.2	3.4	3.2	3.3	3.6	3.7	4.0	3.9	2.8	2.3	2.2	2.1
20	3.1	3.4	2.9	3.2	3.6	3.6	4.1	3.9	2.8	2.3	2.1	2.1
21	3.1	3.2	2.7	3.3	3.6	3.5	4.0	4.1	2.8	2.3	2.1	2.2
22	3.1	3.3	2.7	3.2	3.7	3.5	4.1	4.0	2.8	2.2	2.1	2.3
23	3.1	3.3	2.9	3.3	3.7	3.6	4.6	4.1	2.8	2.2	2.1	2.2
24	3.2	3.3	3.1	3.3	3.6	3.5	5.2	4.1	2.8	2.1	2.0	2.2
25	3.2	3.3	3.1	3.3	3.5	3.6	4.9	4.0	3.0	2.1	2.0	2.4
26	3.2	3.0	3.1	3.2	3.5	3.6	4.6	3.7	3.3	2.1	2.0	2.5
27	3.2	3.1	3.1	3.2	3.6	3.6	5.0	3.5	3.3	2.0	2.0	2.5
28	3.2	3.3	3.1	3.2	3.6	3.6	4.8	3.5	3.1	2.0	2.1	2.6
29	3.2	3.3	3.1	3.2	---	3.7	5.8	3.4	3.0	2.0	2.1	2.6
30	3.3	3.4	3.1	3.2	---	3.7	6.8	3.4	2.9	2.2	2.1	2.6
31	3.3	---	3.0	3.3	---	3.7	---	3.5	---	2.3	2.0	---
TOTAL	95.7	99.0	97.7	100.9	101.1	113.7	130.4	145.9	94.6	71.7	66.4	69.5
MEAN	3.09	3.30	3.15	3.25	3.61	3.67	4.35	4.71	3.15	2.31	2.14	2.32
MAX	3.3	3.5	3.5	3.4	3.9	6.0	6.8	7.6	3.7	2.7	2.5	2.6
MIN	2.9	3.0	2.6	3.0	3.3	3.1	3.7	3.4	2.8	2.0	2.0	2.1
AC-FT	190	196	194	200	201	226	259	289	188	142	132	138

WTR YR 1991 TOTAL 1186.6 MEAN 3.25 MAX 7.6 MIN 2.0 AC-FT 2350

OWENS LAKE BASIN

10270985 ABELOUR DITCH NEAR BISHOP, CA

LOCATION.--Lat 37°20'30", long 118°28'41", SE 1/4 NE 1/4 sec.17, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, on left bank 400 ft upstream from Highway 168 road crossing, 0.6 mi downstream from outlet in penstock to Bishop Creek powerplant No. 6, and 4.8 mi west of Bishop.

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 4,750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Ditch diverts water from Bishop Creek powerplant No. 6 penstock for irrigation and domestic use.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2.4 ft³/s, July 22, 1991, minimum daily, 1.3 ft³/s, Dec. 23, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.8	1.8	2.0	1.7	1.7	1.7	1.8	2.3	2.1	1.9	1.9
2	2.1	1.8	1.8	2.0	1.7	1.7	1.8	1.9	2.3	2.1	1.9	1.8
3	2.1	1.8	1.8	2.0	1.7	1.7	1.9	1.8	2.2	2.2	1.9	1.8
4	2.1	1.8	1.9	2.0	1.7	1.7	2.0	1.9	2.0	2.0	1.9	1.9
5	2.1	1.8	1.9	2.0	1.7	1.7	2.0	1.9	2.0	1.8	1.9	1.9
6	2.1	1.8	1.8	2.0	1.7	1.7	2.0	1.9	2.0	1.7	1.9	1.9
7	2.2	1.8	1.8	2.0	1.7	1.7	2.0	1.9	2.0	1.6	1.9	1.9
8	2.1	1.8	1.8	2.0	1.7	1.7	2.0	1.8	2.0	1.7	1.8	1.9
9	1.9	1.8	1.8	2.0	1.7	1.7	2.0	1.9	2.0	1.8	1.8	1.9
10	1.8	1.8	1.8	2.0	1.7	1.7	1.9	1.9	1.9	1.8	1.8	1.9
11	1.8	1.8	1.8	2.0	1.7	1.6	1.9	1.9	1.9	1.7	1.8	1.9
12	1.8	1.8	1.8	2.0	1.7	1.6	1.9	1.9	1.8	1.9	1.9	1.9
13	1.8	1.8	1.8	2.0	1.7	1.7	1.9	1.8	1.8	2.0	1.9	1.9
14	1.8	1.8	1.8	1.8	1.7	1.6	1.9	1.8	1.8	2.0	1.8	1.9
15	1.9	1.8	1.8	1.7	1.7	1.7	1.9	1.8	2.0	1.9	1.9	1.9
16	1.8	1.8	1.8	1.6	1.7	1.6	1.8	1.8	2.1	1.9	1.8	1.9
17	1.8	1.8	1.8	1.7	1.7	1.7	1.9	1.8	2.1	1.9	1.8	1.9
18	1.8	1.8	1.8	1.7	1.7	1.7	1.8	1.8	2.2	2.0	1.9	1.8
19	1.8	1.8	1.8	1.7	1.8	1.7	1.8	1.8	2.2	2.0	1.9	1.9
20	1.8	1.8	e1.8	1.7	1.7	1.7	1.9	1.8	2.2	2.1	1.9	1.9
21	1.8	1.8	e1.8	1.7	1.7	1.7	1.8	1.8	2.2	2.2	1.8	1.9
22	1.8	1.8	e1.6	1.7	1.7	1.7	1.8	1.8	2.1	2.4	1.8	1.9
23	1.8	1.8	e1.3	1.7	1.7	1.7	1.8	1.8	2.2	2.2	1.8	1.9
24	1.7	1.8	e1.4	1.7	1.7	1.7	1.8	1.7	2.2	2.2	1.9	1.9
25	1.7	1.8	2.0	1.7	1.7	1.8	1.8	1.7	2.2	2.0	1.8	1.9
26	1.7	1.8	2.0	1.7	1.7	1.8	1.8	1.8	2.2	1.9	1.9	1.9
27	1.7	1.8	2.0	1.7	1.7	1.8	1.8	1.8	2.1	1.9	1.9	1.9
28	1.8	1.8	2.0	1.7	1.7	1.8	1.8	2.1	2.1	1.9	1.8	1.9
29	1.7	1.8	2.0	1.7	---	1.8	1.7	2.3	2.2	1.9	1.8	1.9
30	1.8	1.8	2.0	1.7	---	1.7	1.7	2.3	2.1	1.9	1.8	1.9
31	1.8	---	2.0	1.7	---	1.7	---	2.3	---	1.9	1.9	---
TOTAL	58.0	54.0	56.3	56.6	47.7	52.8	55.8	58.3	62.4	60.6	57.5	56.7
MEAN	1.87	1.80	1.82	1.83	1.70	1.70	1.86	1.88	2.08	1.95	1.85	1.89
MAX	2.2	1.8	2.0	2.0	1.8	1.8	2.0	2.3	2.3	2.4	1.9	1.9
MIN	1.7	1.8	1.3	1.6	1.7	1.6	1.7	1.7	1.8	1.6	1.8	1.8
AC-FT	115	107	112	112	95	105	111	116	124	120	114	112

WTR YR 1991 TOTAL 676.7 MEAN 1.85 MAX 2.4 MIN 1.3 AC-FT 1340

e Estimated.

10271200 BISHOP CREEK ABOVE POWERPLANT NO. 6, NEAR BISHOP, CA

LOCATION.--Lat 37°21'00", long 118°27'42", in SE 1/4 SE 1/4 sec.9, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, on left bank adjacent to Powerplant No. 6 tailrace and 3.8 mi west of Bishop.

DRAINAGE AREA.--104 mi².

PERIOD OF RECORD.--October 1990 to September 1991. If records for Bishop Creek powerplant No. 6 Conduit (station 10271060) are combined with this record, a record equivalent to that published since October 1936 as Bishop Creek below powerplant No. 6, near Bishop, discontinued September 1990, can be obtained. Monthly and yearly mean discharge prior to October 1969, published in WSP 2127.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 4,510 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated for power development by South Lake, Lake Sabrina, and Intake No. 2 Reservoir (stations 10270700, 10270870, and 10270875), combined capacity, 20,311 acre-ft, and five powerplants. Water is diverted into basin via Birch-McGee Diversion (station 10270900). Water is diverted out of basin via Abelour Ditch (station 10270985) for irrigation and domestic use. Diversion to Bishop Creek powerplant No. 6 bypasses this station and is published as a line item below.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37 ft³/s, Mar. 27-29, 1991, gage height, 0.76 ft; minimum daily, 0.08 ft³/s, June 5, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.33	.19	e.20	.27	.38	.36	.31	.10	.32	.30	.35
2	.19	.18	.19	e.20	.19	.34	.33	.26	.10	.32	.50	.36
3	.11	.11	.19	e.20	.19	.59	.33	.19	.12	8.5	.52	.31
4	.10	.19	.19	e.20	.19	1.5	.34	.18	.10	1.2	.30	.38
5	.10	.19	.19	e.20	.19	.34	.40	.21	.08	.71	.13	.42
6	.10	.19	.19	e.20	.19	.40	.20	.16	.10	1.0	.20	.61
7	.18	.15	.25	e.20	.19	.37	.34	.11	.22	.52	.09	.53
8	.19	.10	.32	e.20	.19	.35	.19	.10	.33	2.3	.17	.48
9	.19	.12	.19	e.20	.19	.33	.19	.09	.33	4.8	.21	.34
10	.32	.19	.19	e.20	.10	.15	.13	.10	.49	4.3	.64	.29
11	.33	.19	.19	e.20	.10	.14	.18	.10	.64	1.1	.40	.28
12	.33	.19	.19	e.20	.10	.19	.11	.16	1.9	1.9	.19	.23
13	.32	.19	.19	.22	.10	.19	.14	.16	2.1	2.1	.24	.35
14	.28	.19	e.19	.26	.17	.21	.21	.19	.65	.72	.20	.30
15	.23	.22	e.19	.14	.16	.22	.25	.19	.60	.65	.22	.33
16	.24	.33	e.19	.11	.24	.33	.19	.19	.63	.60	.32	.33
17	.10	.32	e.19	.11	.33	.48	.19	.25	.49	.69	.33	.33
18	.18	.19	e.19	.30	.43	.52	.19	.13	.48	.52	.37	.42
19	.21	.19	e.19	.33	.33	.52	.19	.10	.48	.89	.41	.42
20	.19	.19	e.19	.33	.33	.35	.19	.10	.49	.92	.37	.40
21	.19	.19	e.19	.33	.33	.33	.19	.11	.48	.54	.41	.45
22	.19	.19	e.19	e.20	.33	.33	.18	.10	.37	.56	.34	.54
23	.19	.19	e.19	e.20	.33	.33	.19	.09	.35	.79	.54	.40
24	.19	.19	e.19	e.20	.33	.48	.19	.11	.59	.38	.60	.39
25	.11	.19	e.19	e.20	.33	27	.19	.11	.44	.28	.43	.32
26	.16	.14	e.19	e.20	.33	34	.19	.16	.44	.44	.42	.41
27	.19	.12	e.19	e.20	.33	35	.12	.13	.49	.32	.40	.34
28	.19	.15	e.19	e.20	.33	35	.10	.15	.45	.28	.36	.33
29	.19	.19	e.19	e.20	---	27	.14	.19	.62	.36	.41	.29
30	.15	.19	e.19	e.20	---	1.3	.16	.15	.46	.35	.54	.23
31	.15	---	e.19	e.20	---	.54	---	.15	---	.51	.41	---
TOTAL	5.98	5.69	6.08	6.53	6.82	169.21	6.30	4.73	15.12	38.87	10.97	11.16
MEAN	.19	.19	.20	.21	.24	5.46	.21	.15	.50	1.25	.35	.37
MAX	.33	.33	.32	.33	.43	35	.40	.31	2.1	8.5	.64	.61
MIN	.10	.10	.19	.11	.10	.14	.10	.09	.08	.28	.09	.23
AC-FT	12	11	12	13	14	336	12	9.4	30	77	22	22
a	2880	2720	2720	2290	2010	2050	3720	5190	5810	7090	5360	4910

WTR YR 1991 TOTAL 287.46 MEAN .79 MAX 35 MIN .08 AC-FT 570 a 46730

e Estimated.

a Diversion, in acre-feet to Bishop Creek powerplant No. 6, provided by Southern California Edison Co.

10287060 LUNDY LAKE NEAR LEE VINING, CA

LOCATION.--Lat 38°01'56", Long 119°13'11", in NW 1/4 SE 1/4 sec.16, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, near right abutment of spillway of Lundy Lake Dam on Mill Creek and 7.6 mi northwest of Lee Vining.

DRAINAGE AREA.--16.3 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1910. Usable capacity, 4,113 acre-ft between elevations 7,766.43 ft, invert of outlet, and 7,807.81 ft, crest of spillway. Figures given represent usable contents. Water is used for power development and irrigation downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,082 acre-ft, July 9, 1991, elevation, 7,790.76 ft; minimum, 492 acre-ft, Oct. 2, 1990, elevation, 7,773.73 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 17, 1981)

7,766.43	0	7,790	2,001
7,770	212	7,800	3,126
7,780	1,027	7,810	4,406

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	493	508	555	577	571	566	723	848	933	1751	1877	1420
2	492	508	557	578	570	567	731	848	947	1782	1869	1402
3	493	507	557	578	569	581	733	848	986	1832	1861	1384
4	496	510	557	581	568	611	741	850	1027	1889	1853	1371
5	497	507	560	582	566	612	757	854	1084	1952	1842	1355
6	495	509	561	583	566	613	767	859	1106	2006	1834	1342
7	496	504	564	582	565	614	778	873	1124	2042	1822	1324
8	496	504	565	583	565	616	785	893	1153	2072	1808	1308
9	496	506	566	583	565	624	794	904	1191	2064	1793	1288
10	497	506	567	581	564	626	802	903	1262	2039	1782	1269
11	498	508	568	582	562	628	803	902	1370	2016	1765	1256
12	499	509	570	581	560	629	808	901	1482	2012	1753	1243
13	499	512	571	581	560	631	812	902	1592	2011	1739	1236
14	499	513	570	580	559	638	820	901	1669	2001	1729	1223
15	501	516	571	580	560	642	822	901	1724	1990	1717	1214
16	500	518	571	580	561	644	826	909	1769	1971	1703	1203
17	502	519	571	579	559	649	830	919	1801	1943	1687	1192
18	504	522	576	579	559	661	834	925	1829	1937	1669	1181
19	503	526	576	578	557	667	836	927	1846	1939	1653	1171
20	503	528	576	579	556	671	841	933	1841	1931	1637	1162
21	502	528	577	578	555	672	845	934	1826	1919	1622	1152
22	502	529	577	578	553	675	847	935	1806	1909	1602	1143
23	504	532	577	579	551	677	847	942	1792	1905	1586	1131
24	504	535	578	576	552	682	849	974	1790	1900	1569	1120
25	505	538	579	577	551	696	847	1006	1784	1901	1554	1112
26	505	540	580	576	549	700	847	1015	1769	1900	1531	1100
27	507	542	580	576	552	704	845	997	1771	1898	1514	1087
28	507	546	579	576	555	705	844	977	1765	1897	1492	1075
29	508	552	578	575	---	708	845	973	1754	1890	1476	1065
30	510	554	577	572	---	711	847	959	1742	1890	1458	1056
31	508	---	577	571	---	718	---	940	---	1886	1449	---
MAX	510	554	580	583	571	718	849	1015	1846	2072	1877	1420
MIN	492	504	555	571	549	566	723	848	933	1751	1449	1056
a	7773.92	7774.49	7774.77	7774.70	7774.50	7776.46	7777.97	7779.02	7787.49	7788.89	7784.53	7780.32
b	+17	+46	+23	-6	-16	+163	+129	+93	+802	+144	-437	-393

WTR YR 1991 MAX 2072 MIN 492 b +565

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10287069 MILL CREEK FLUME BELOW LUNDY LAKE, NEAR LEE VINING, CA

LOCATION.--Lat 38°01'59", long 119°12'56", in SE 1/4 NE 1/4 sec.16, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, on left bank, 20 ft upstream from Deer Creek, 70 ft downstream from road culvert, 1,400 ft downstream from Lundy Lake Dam, and 7.5 mi northwest of Lee Vining.

DRAINAGE AREA.--18.1 mi².

PERIOD OF RECORD.--October 1990 to September 1991. If records for Upper Conway Ditch and Lundy powerplant tailrace (stations 10287145 and 10287195) are combined with this record, a record equivalent to that published since October 1942 as Mill Creek below Lundy Lake, near Mono Lake can be obtained. Monthly and yearly mean discharges prior to October 1969, published in WSP 2127.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 7,760 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated by Lundy Lake (station 10287060). Most of the water is diverted at Lundy Lake via Lundy powerplant to Upper Conway Ditch and Lundy powerplant tailrace for power development and irrigation.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12 ft³/s, July 19, 1991, gage height, 0.56 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.6	2.6	1.2
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.4	2.6	1.2
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.6	2.6	1.2
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.7	2.6	1.7
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.8	2.6	2.1
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.8	2.6	2.1
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.9	2.6	2.1
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	2.6	2.1
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	2.4	1.9
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.1	2.4	1.9
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.3	2.4	1.9
12	.00	.00	.00	.00	.00	.00	.00	.00	2.1	3.3	2.4	1.9
13	.00	.00	.00	.00	.00	.00	.00	.00	2.8	3.4	2.4	1.9
14	.00	.00	.00	.00	.00	.00	.00	.00	2.4	3.5	2.4	2.1
15	.00	.00	.00	.00	.00	.00	.00	.00	2.7	3.5	2.4	2.1
16	.00	.00	.00	.00	.00	.00	.00	.00	2.7	3.5	2.4	2.1
17	.00	.00	.00	.00	.00	.00	.00	.00	2.5	3.2	2.4	2.1
18	.00	.00	.00	.00	.00	.00	.00	.00	2.3	2.8	2.5	2.1
19	.00	.00	.00	.00	.00	.00	.00	.00	2.2	3.0	2.6	1.7
20	.00	.00	.00	.00	.00	.00	.00	.00	2.2	3.0	2.4	1.5
21	.00	.00	.00	.00	.00	.00	.00	.00	2.2	3.0	2.2	1.5
22	.00	.00	.00	.00	.00	.00	.00	.00	2.2	3.0	2.2	1.5
23	.00	.00	.00	.00	.00	.00	.00	.00	2.2	3.0	2.2	1.5
24	.00	.00	.00	.00	.00	.00	.00	.00	2.4	2.8	2.0	1.5
25	.00	.00	.00	.00	.00	.00	.00	.00	2.4	2.8	1.9	1.4
26	.00	.00	.00	.00	.00	.00	.00	.00	2.4	2.8	1.8	1.5
27	.00	.00	.00	.00	.00	.00	.00	.00	2.4	2.8	1.7	1.5
28	.00	.00	.00	.00	.00	.00	.00	.00	2.4	2.8	1.6	1.5
29	.00	.00	.00	.00	---	.00	.00	.00	2.6	2.6	1.4	1.6
30	.00	.00	.00	.00	---	.00	.00	.00	2.8	2.6	1.2	1.7
31	.00	---	.00	.00	---	.00	---	.00	---	2.6	1.2	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.90	91.2	69.3	52.1
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	1.53	2.94	2.24	1.74
MAX	.00	.00	.00	.00	.00	.00	.00	.00	2.8	3.5	2.6	2.1
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.4	1.2	1.2
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	91	181	137	103

WTR YR 1991 TOTAL 258.50 MEAN .71 MAX 3.5 MIN .00 AC-FT 513

10287145 UPPER CONWAY DITCH NEAR LEE VINING, CA

LOCATION.--Lat 38°02'32", long 119°10'18", in SE 1/4 SW 1/4 sec.12, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, on left bank, 200 ft downstream from ditch inlet and Lundy powerplant, and 6.6 mi northwest of Lee Vining.

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 7,020 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated at Lundy powerplant during irrigation season.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 14 ft³/s, July 19, 1991; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12
6	.00	.00	.00	.00	.00	.00	.00	.00	6.1	12	12	11
7	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12	12
8	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12	12
9	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12	12
10	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12	13
11	.00	.00	.00	.00	.00	.00	.00	.00	12	11	12	7.0
12	.00	.00	.00	.00	.00	.00	.00	.00	12	11	12	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	12	11	12	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	12	11	12	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	12	11	12	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	12	11	12	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	12	14	12	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	12	13	12	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	12	13	12	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	11	12	12	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	11	12	12	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	11	12	12	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	13	12	12	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	13	12	12	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	12	12	12	.00
31	.00	---	.00	.00	---	.00	---	.00	---	12	12	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	293.10	370	372	127.00
MEAN	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	9.77	11.9	12.0	4.23
MAX	.00	.00	.00	.00	.00	.00	.00	.00	13	14	12	13
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	11	12	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	581	734	738	252

WTR YR 1991 TOTAL 1162.10 MEAN 3.18 MAX 14 MIN .00 AC-FT 2310

10287195 LUNDY POWERPLANT TAILRACE NEAR LEE VINING, CA

LOCATION.--Lat 38°02'34", long 119°10'18", in SE 1/4 SW 1/4 sec.12, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, on right bank 200 ft downstream from Lundy powerplant and 6.6 mi northwest of Lee Vining.

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and culvert control. Elevation of gage is 7,020 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Water is diverted from Lundy Lake (station 10287060) to Lundy powerplant. Diversion upstream during irrigation season to Upper Conway Ditch (station 10287145).

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 57 ft³/s, June 5, 1991, minimum daily, 4.9 ft³/s, several days in 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	5.5	5.3	5.5	5.5	5.0	5.0	9.3	37	25	6.0	6.0
2	5.3	5.5	5.3	5.5	5.5	5.0	5.0	9.3	34	25	6.0	6.0
3	5.3	5.5	5.4	5.5	5.5	5.0	4.9	9.3	40	25	6.0	6.1
4	5.3	5.5	5.5	5.5	5.5	5.0	4.9	9.3	52	25	6.0	6.1
5	5.3	5.5	5.5	5.5	5.4	5.0	4.9	9.3	57	25	6.0	6.1
6	5.3	5.5	5.5	5.5	5.3	5.0	4.9	9.3	51	25	6.0	6.1
7	5.3	5.5	5.3	5.5	5.3	5.0	4.9	9.3	46	25	6.0	6.1
8	5.3	5.5	5.3	5.5	5.3	5.0	6.2	9.3	46	25	6.0	6.0
9	5.3	5.5	5.3	5.5	5.5	5.0	7.0	13	46	36	6.0	6.0
10	5.3	5.5	5.3	5.5	5.5	5.2	6.8	17	46	43	6.0	6.0
11	5.5	5.5	5.3	5.5	5.5	5.2	6.9	16	46	42	6.0	7.6
12	5.5	5.5	5.3	5.5	5.4	5.2	7.0	16	46	33	6.0	9.5
13	5.5	5.5	5.3	5.5	5.3	5.2	7.0	16	45	26	6.0	9.5
14	5.5	5.3	5.3	5.5	5.3	5.0	7.0	16	45	26	6.0	9.5
15	5.5	4.9	5.2	5.5	5.3	4.9	7.0	16	45	26	6.0	9.5
16	5.5	5.0	5.2	5.5	5.3	5.0	7.1	16	46	26	6.0	9.5
17	5.5	5.2	5.2	5.5	5.3	5.0	7.1	16	46	26	6.0	9.5
18	5.5	5.2	5.2	5.5	5.3	5.0	7.0	16	46	20	6.0	9.4
19	5.5	5.2	5.3	5.5	5.3	4.9	7.0	16	46	14	6.0	9.4
20	5.5	5.2	5.3	5.5	5.3	4.9	7.0	16	46	15	6.0	9.6
21	5.5	5.2	5.3	5.5	5.3	4.9	7.1	16	46	15	6.0	9.5
22	5.5	5.2	5.3	5.5	5.3	4.9	8.4	16	46	13	6.0	9.7
23	5.5	5.2	5.4	5.5	5.2	4.9	9.1	18	46	12	6.0	9.7
24	5.5	5.2	5.5	5.5	5.2	4.9	9.1	19	40	9.0	6.0	9.7
25	5.5	5.2	5.5	5.5	5.2	4.9	9.1	23	36	6.0	6.0	9.7
26	5.6	5.2	5.5	5.5	5.2	4.9	9.1	36	36	6.0	6.0	9.5
27	5.6	5.3	5.5	5.5	5.2	5.0	9.2	53	29	6.0	6.0	9.5
28	5.6	5.3	5.5	5.5	5.1	5.0	9.3	53	24	6.0	6.0	9.3
29	5.6	5.3	5.5	5.5	---	5.0	9.3	49	25	6.0	6.0	9.4
30	5.6	5.3	5.5	5.5	---	5.0	9.3	45	25	6.0	6.0	8.3
31	5.6	---	5.4	5.5	---	5.0	---	42	---	6.0	6.0	---
TOTAL	169.1	159.9	166.2	170.5	149.3	154.9	213.6	634.4	1265	624.0	186.0	247.8
MEAN	5.45	5.33	5.36	5.50	5.33	5.00	7.12	20.5	42.2	20.1	6.00	8.26
MAX	5.6	5.5	5.5	5.5	5.5	5.2	9.3	53	57	43	6.0	9.7
MIN	5.3	4.9	5.2	5.5	5.1	4.9	4.9	9.3	24	6.0	6.0	6.0
AC-FT	335	317	330	338	296	307	424	1260	2510	1240	369	492

WTR YR 1991 TOTAL 4140.7 MEAN 11.3 MAX 57 MIN 4.9 AC-FT 8210

10287260 WAUGH LAKE NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'04", long 119°10'52", unsurveyed, T.2 S., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, near outlet at base of Rush Creek Meadows Dam on Rush Creek and 6.0 mi southwest of town of June Lake.

DRAINAGE AREA.--15.3 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed by concrete dam completed in 1925. Total capacity, 5,277 acre-ft between elevations 9,368.60 ft, invert of outlet, and 9,415.61 ft, crest of spillway, all of which is available for release. Figures given represent total contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,422 acre-ft, July 3, 1991, elevation, 9,416.39 ft; minimum, no storage Oct. 1, 1990 to May 22, 1991.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 18, 1981)

9,375	0	9,400	2,670
9,380	148	9,405	3,447
9,385	681	9,410	4,277
9,390	1,283	9,418	5,727
9,395	1,948		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	e.00	808	5377	5340	4674
2	.00	.00	.00	.00	.00	.00	.00	e.00	1093	5404	5331	4642
3	.00	.00	.00	.00	.00	.00	.00	e.00	1490	5420	5321	4617
4	.00	.00	.00	.00	.00	.00	.00	e.00	1934	5415	5310	4600
5	.00	.00	.00	.00	.00	.00	.00	e.00	2298	5407	5299	4559
6	.00	.00	.00	.00	.00	.00	.00	e.00	2581	5388	5284	4498
7	.00	.00	.00	.00	.00	.00	.00	e.00	2864	5383	5266	4434
8	.00	.00	.00	.00	.00	.00	.00	e.00	3131	5366	5227	4366
9	.00	.00	.00	.00	.00	.00	.00	e.00	3458	5353	5207	4301
10	.00	.00	.00	.00	.00	.00	.00	e.00	3864	5358	5183	4226
11	.00	.00	.00	.00	.00	.00	.00	e.00	4289	5355	5162	4150
12	.00	.00	.00	.00	.00	.00	.00	e.00	4665	5351	5138	4075
13	.00	.00	.00	.00	.00	.00	.00	e.00	4949	5345	5122	3993
14	.00	.00	.00	.00	.00	.00	.00	e.00	5115	5334	5109	3912
15	.00	.00	.00	.00	.00	.00	.00	e.00	5255	5332	5093	3831
16	.00	.00	.00	.00	.00	.00	.00	e.00	5338	5312	5067	3752
17	.00	.00	.00	.00	.00	.00	.00	e.00	5319	5305	5051	3673
18	.00	.00	.00	.00	.00	.00	.00	e.00	5358	5297	5029	3596
19	.00	.00	.00	.00	.00	.00	.00	e.00	5368	5295	5007	3479
20	.00	.00	.00	.00	.00	.00	.00	e.00	5357	5292	4986	3343
21	.00	.00	.00	.00	.00	.00	.00	e.00	5360	5281	4963	3200
22	.00	.00	.00	.00	.00	.00	.00	e.00	5349	5275	4943	3061
23	.00	.00	.00	.00	.00	.00	.00	e66	5331	e5279	4916	2925
24	.00	.00	.00	.00	.00	.00	.00	e132	5319	e5282	4891	2789
25	.00	.00	.00	.00	.00	.00	.00	e198	5308	e5290	4864	2660
26	.00	.00	.00	.00	.00	.00	.00	e274	5308	e5292	4841	2525
27	.00	.00	.00	.00	.00	.00	.00	e300	5303	e5301	4814	2396
28	.00	.00	.00	.00	.00	.00	.00	e396	5314	e5314	4789	2270
29	.00	.00	.00	.00	---	.00	.00	e462	5312	e5329	4760	2146
30	.00	.00	.00	.00	---	.00	.00	e558	5331	e5345	4728	2025
31	.00	---	.00	.00	---	.00	---	e626	---	e5340	4704	---
MAX	.00	.00	.00	.00	.00	.00	.00	626	5368	5420	5340	4674
MIN	.00	.00	.00	.00	.00	.00	.00	.00	808	5275	4704	2025
a	9370.00	9370.00	9370.00	9370.00	9370.00	9370.00	9370.00	9384.51	9415.90	9415.95	9412.45	9395.55
b	0	0	0	0	0	0	0	+626	+4705	+9	-636	-2679

WTR YR 1991 MAX 5420 MIN .00 b +2025

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287280 GEM LAKE NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'07", long 119°08'25", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in valve house 100 ft downstream from left abutment of dam on Rush Creek and 4.0 mi southwest of town of June Lake.

DRAINAGE AREA.--22.0 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by concrete dam completed in 1916. Usable capacity, 17,798 acre-ft between elevations 8,964.33 ft, invert of outlet, and 9,053.64 ft, crest of upper spillway. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 12,748 acre-ft, July 19-21, 1991, elevation, 9,035.21 ft; minimum, 1,086 acre-ft, Mar. 22, 1991, elevation, 8,983.46 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Sept. 1, 1981)

8,980	441	9,010	6,547
8,985	1,348	9,025	10,121
8,990	2,300	9,040	14,023
9,000	4,325	9,055	18,187

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8363	6855	5471	3968	2874	1970	1148	1434	5133	10733	12640	11553
2	8306	6816	5425	3939	2838	1929	1145	1432	5310	10906	12633	11506
3	8237	6768	5367	3895	2796	1920	1143	1434	5540	11125	12609	11478
4	8178	6713	5341	3857	2760	1899	1147	1438	5774	11357	12585	11447
5	8114	6666	5295	3807	2724	1848	1158	1477	6000	11607	12554	11439
6	8050	6618	5240	3769	2692	1800	1152	1569	6193	11801	12512	11449
7	7976	6572	5192	3730	2656	1756	1150	1705	6407	11959	12480	11462
8	7898	6527	5139	3709	2621	1699	1154	1825	6613	12103	12448	11485
9	7835	6488	5089	3670	2593	1648	1158	1949	6844	12215	12406	11493
10	7795	6441	5043	3628	2557	1607	1158	1979	7078	12309	12370	11516
11	7725	6398	4995	3607	2520	1560	1159	1972	7346	12412	12333	11527
12	7628	6353	4948	3568	2494	1509	1165	1962	7633	12501	12296	11542
13	7563	6299	4902	3529	2455	1470	1165	1997	7927	12583	12254	11563
14	e7495	6256	4856	3504	2418	1428	1170	2000	8178	12651	12220	11568
15	e7428	6209	4811	3463	2396	1391	1176	2041	8445	12690	12192	11581
16	e7363	6173	4765	3424	2363	1337	1176	2172	8690	12722	12168	11591
17	e7298	6114	4710	3384	2339	1333	1176	2333	8989	12725	12118	11604
18	7249	6067	4664	3360	2298	1300	1176	2374	9252	12730	12082	11609
19	7219	6018	4611	3321	2273	1256	1176	2398	9428	12748	12053	11653
20	7184	5966	4563	3300	2238	1209	1178	2402	9571	12748	12006	11721
21	7177	5924	4516	3255	2199	1145	1178	2431	9704	12748	11972	11796
22	7145	5870	4456	3216	2162	1086	1176	2526	9870	12727	11944	11845
23	7129	5825	4407	3184	2143	1114	1183	2772	10011	12698	11912	11894
24	7113	5783	4362	3155	2106	1123	1194	3129	10141	12688	11858	11949
25	7087	5748	4307	3116	2073	1145	1211	3483	10234	12667	11832	12001
26	7064	5703	4252	3094	2046	1147	1224	3818	10319	12667	11778	12074
27	7039	5657	4201	3052	2014	1148	1235	4099	10390	12646	11749	12139
28	7018	5615	4158	3019	1993	1150	1265	4433	10453	12625	11695	12194
29	6972	5568	4103	2979	---	e1154	1300	4729	10526	12604	11658	12265
30	6944	5520	4063	2942	---	e1152	1376	4928	10611	12614	11620	12328
31	6915	---	4017	2906	---	e1150	---	5017	---	12630	11584	---
MAX	8363	6855	5471	3968	2874	1970	1376	5017	10611	12748	12640	12328
MIN	6915	5520	4017	2906	1993	1086	1143	1432	5133	10733	11584	11439
a	9011.61	9005.41	8998.45	8993.06	8988.41	8983.93	8985.15	9003.12	9026.95	9034.76	9030.75	9033.61
b	-1503	-1395	-1503	-1111	-913	-843	+226	+3641	+5594	+2019	-1046	+744

WTR YR 1991 MAX 12748 MIN 1086 b +3910

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

MONO LAKE BASIN

10287285 AGNEW LAKE NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'30", long 119°07'52", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in boat house at left abutment of dam on Rush Creek and 3.3 mi southwest of town of June Lake.

DRAINAGE AREA.--23.3 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by concrete dam completed in 1916. Usable capacity, 810 acre-ft between elevations 8,470.00 ft, invert of outlet, and 8,495.88 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 817 acre-ft, July 2, 1991, elevation, 8,496.06 ft; minimum, 22 acre-ft, Feb. 28, 1991, elevation, 8,470.97 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 25, 1981)

8,470	0	8,485	415
8,475	122	8,490	587
8,480	260	8,498	896

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	803	e28	e23	e23	25	23	50	e105	e336	809	809	801
2	803	e23	e23	e23	24	23	50	e104	e348	808	808	801
3	804	e23	e23	e23	26	23	53	e109	e370	807	808	801
4	802	e23	24	e23	26	23	54	e114	e402	808	807	803
5	797	e23	24	e23	25	23	56	e117	e428	805	807	803
6	795	e23	25	e23	25	23	58	e119	e448	805	805	803
7	792	e23	e23	e23	25	23	59	e130	e479	806	805	804
8	796	e23	e23	e23	25	23	61	e135	e499	803	807	803
9	799	e23	e23	e23	25	23	64	e143	e523	801	806	803
10	802	e23	e23	e23	26	23	64	e151	e544	803	805	804
11	804	e23	e23	e23	25	23	65	e153	e565	803	805	805
12	803	e23	e23	e23	26	23	67	e162	609	803	805	806
13	804	e23	e23	e23	27	23	71	e162	634	800	807	806
14	804	e23	e23	e23	27	23	71	e167	657	798	806	807
15	802	e23	e23	e23	25	23	72	e175	673	797	808	807
16	803	e23	e23	e23	24	23	72	e175	690	798	809	807
17	799	e23	e23	e23	24	23	74	e181	704	798	810	807
18	764	e23	e23	e23	25	30	76	e189	715	799	809	807
19	682	e23	e23	e23	26	30	78	e195	724	798	809	808
20	597	e23	e23	e23	26	31	80	e197	736	799	809	807
21	513	e23	e23	e23	26	32	80	e203	745	801	809	808
22	440	e23	e23	e23	26	34	84	e209	753	801	809	808
23	370	e23	e23	e23	26	33	85	e217	760	801	807	809
24	327	e23	e23	e23	25	37	87	e228	767	801	805	808
25	276	e23	e23	e23	26	41	88	e243	773	802	804	806
26	254	e23	e23	e23	25	42	89	e260	781	803	801	806
27	210	e23	e23	e23	25	44	93	e275	785	803	800	806
28	172	e23	e23	e23	22	46	96	e287	789	803	800	807
29	142	e23	e23	e23	---	48	100	e302	799	803	800	807
30	118	e23	e23	e23	---	49	102	e311	805	795	801	808
31	e76	---	e23	e23	---	50	---	e323	---	802	801	---
MAX	804	28	25	23	27	50	102	323	805	809	810	809
MIN	76	23	23	23	22	23	50	104	336	795	800	801
a	8473.21	8471.00	8471.00	8471.00	8470.97	8472.14	8474.24	8482.10	8495.76	8495.68	8495.64	8495.82
b	-726	-53	0	0	-1	+28	+52	+221	+482	-3	-1	+7

WTR YR 1991 MAX 810 MIN 22 b +6

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10287289 RUSH CREEK FLUME BELOW AGNEW LAKE, NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'33", long 119°07'47", in NE 1/4 SW 1/4 sec.20, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank 600 ft downstream from Agnew Lake Dam, and 3.4 mi southwest of town of June Lake.

DRAINAGE AREA.--23.3 mi².

PERIOD OF RECORD.--October 1990 to September 1991. If records for Rush Creek powerplant tailrace (station 10287300) are combined with this record, a record equivalent to that published since October 1951 as Rush Creek below Agnew Lake (station 10287290) can be obtained. Monthly and yearly mean discharges prior to October 1969, published in WSP 2127.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 8,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated for power development by Waugh, Gem, and Agnew Lakes (stations 10287260, 10287280, and 10287285). Most of the water is diverted at either Gem or Agnew Lakes to Rush Creek powerplant tailrace via Rush Creek powerplant.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25 ft³/s, Oct. 31, Nov. 1, 1990, gage height, 1.52 ft; no flow for many days in 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.52	25	.22	e.22	.19	.81	e.00	e.10	e.10	2.4	e.70	e.40
2	e.59	10	.24	e.23	.17	.78	e.00	e.10	e.10	3.1	e.80	e.30
3	e.53	2.1	.21	e.25	.15	1.2	e.00	e.10	e.10	3.0	e.70	e.30
4	e.50	1.3	.23	e.26	.15	3.0	e.00	e.10	e.10	3.0	e.50	e.30
5	e.77	1.1	.27	e.28	.15	1.8	e.00	.09	e.10	3.1	e.50	e.40
6	e.70	.72	.30	e.29	.15	1.1	.00	.14	e.10	2.4	e.50	e.30
7	e.54	.61	.27	.33	.15	.84	.10	.23	e.10	1.9	e.50	e.30
8	e.49	.57	.22	.36	.15	.40	.06	.21	e.10	e2.7	e.50	e.50
9	e.43	.46	.22	.29	.15	.00	.02	1.8	e.10	e2.2	e.50	e.50
10	e.36	.45	.21	.24	.17	.09	.04	.07	e.10	e1.6	e.50	e.30
11	e.28	.36	.26	.30	.20	.11	.39	e.10	e.10	e1.6	e.50	e.30
12	e.23	.38	e.22	.29	.25	.00	.07	e.10	e.10	e1.9	e.50	e.30
13	e.45	.42	e.22	.29	.25	.00	.01	e.10	e.10	e2.7	e.50	e.30
14	e.54	.55	e.22	.29	.27	.00	.01	e.10	e.10	e2.0	e.50	e.30
15	e.47	.29	e.22	.27	.29	.00	.08	e.10	e.10	e1.8	e.50	e.30
16	e.44	.35	e.22	.24	.19	.00	.31	e.10	e.10	e1.5	e.50	e.30
17	e.45	.39	e.22	.19	.19	.00	.17	e.10	e.10	e1.5	e.50	e.30
18	e.98	.38	e.22	.24	.18	.00	.11	1.1	e.10	e1.5	e.50	e.30
19	e.52	.36	e.22	.25	.15	.00	.03	.81	e.10	e1.8	e.50	e.30
20	e.45	.35	e.22	.28	.15	.00	.00	e.10	e.10	e1.6	e.50	e.30
21	e.38	.22	e.22	.28	.15	.00	.00	e.10	e.10	e1.5	e.50	e.30
22	e.33	.28	e.22	.35	.15	.00	.00	e.10	e.10	e1.4	e.60	e.30
23	e.27	.28	e.22	.30	.19	.00	.00	e.10	e.10	e1.6	e.60	e.30
24	e.19	.18	e.22	.26	.19	.00	.00	.08	e.10	e1.9	e.70	e.30
25	e.14	.15	e.22	.25	.19	.00	.00	e.10	e.10	e1.5	e.70	e.40
26	e.09	.08	e.22	.25	.19	.00	.00	e.10	e.10	e1.4	e.80	e.40
27	e.00	.34	e.22	.25	.20	.00	.00	e.10	e.10	e1.3	e.60	e.40
28	e.00	.12	e.22	.25	.47	e.00	.00	e.10	e1.0	e1.3	e.50	e.30
29	e.00	.14	e.22	.25	---	e.00	e.09	e.10	e.10	e1.9	e.50	e.30
30	e.00	.16	e.22	.24	---	e.00	e.09	e.10	e.10	e1.7	e.40	e.30
31	e11	---	e.22	.20	---	e.00	---	e.10	---	e1.6	e.30	---
TOTAL	22.64	48.09	7.05	8.27	5.43	10.13	1.58	6.73	3.90	60.4	16.90	9.90
MEAN	.73	1.60	.23	.27	.19	.33	.053	.22	.13	1.95	.55	.33
MAX	11	25	.30	.36	.47	3.0	.39	1.8	1.0	3.1	.80	.50
MIN	.00	.08	.21	.19	.15	.00	.00	.07	.10	1.3	.30	.30
AC-FT	45	95	14	16	11	20	3.1	13	7.7	120	34	20

WTR YR 1991 TOTAL 201.02 MEAN .55 MAX 25 MIN .00 AC-FT 399

e Estimated.

10287300 RUSH CREEK POWERPLANT TAILRACE NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'59", long 119°07'17", in NE 1/4 NE 1/4 sec.20, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, on left bank 200 ft downstream from Rush Creek powerplant, 0.1 mi upstream from Reversed Creek, and 2.8 mi southwest of town of June Lake.

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Elevation of gage is 7,230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow is water diverted at either Gem or Agnew Lakes (stations 10287280 and 10287285) to Rush Creek powerplant.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 53 ft³/s, Oct. 19-22, 1990; minimum daily, 5.2 ft³/s, Apr. 30, May 1, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	15	24	21	18	21	7.1	5.2	45	34	35	35
2	34	21	24	22	17	24	7.0	11	45	35	35	34
3	34	23	23	22	17	24	6.9	19	45	35	35	35
4	34	23	23	22	17	24	7.1	19	45	35	35	35
5	34	23	23	22	17	25	6.8	18	45	36	35	35
6	34	24	24	22	17	25	7.1	18	45	36	35	36
7	34	24	25	19	17	25	7.1	27	45	36	35	35
8	34	24	25	17	17	25	7.3	39	45	36	35	35
9	34	23	25	17	17	25	6.9	44	46	36	35	35
10	33	23	25	17	17	25	7.3	44	46	36	35	35
11	34	24	25	17	17	25	7.1	44	46	35	35	35
12	29	24	25	17	18	25	7.0	44	36	35	35	35
13	34	24	15	17	17	25	6.9	45	33	35	35	35
14	33	24	24	17	17	25	6.8	45	35	35	35	35
15	33	24	25	17	14	25	6.8	45	35	35	35	36
16	34	24	25	17	14	26	6.9	44	35	35	35	36
17	34	24	25	17	17	25	6.8	44	35	35	35	36
18	42	24	25	17	17	25	6.7	44	35	35	35	36
19	53	24	25	17	17	25	6.7	44	35	35	35	36
20	53	24	25	18	17	25	6.8	45	35	35	35	35
21	53	24	25	18	17	25	6.9	45	35	35	35	35
22	53	24	25	18	17	26	6.9	45	35	35	35	35
23	42	24	25	17	17	14	6.9	45	35	35	35	36
24	33	24	25	17	17	6.9	6.9	45	35	35	35	36
25	33	25	24	18	16	7.0	6.9	44	35	35	35	36
26	32	25	24	17	17	8.0	6.9	44	35	35	35	36
27	36	25	24	17	17	7.0	7.0	45	35	34	35	36
28	33	24	22	17	17	7.0	7.1	45	35	35	35	35
29	31	24	22	17	---	7.0	6.2	45	35	35	35	35
30	32	24	22	17	---	6.9	5.2	44	35	35	35	35
31	32	---	22	16	---	7.0	---	45	---	35	35	---
TOTAL	1128	706	740	561	471	615.8	206.0	1180.2	1162	1089	1085	1060
MEAN	36.4	23.5	23.9	18.1	16.8	19.9	6.87	38.1	38.7	35.1	35.0	35.3
MAX	53	25	25	22	18	26	7.3	45	46	36	35	36
MIN	29	15	15	16	14	6.9	5.2	5.2	33	34	35	34
AC-FT	2240	1400	1470	1110	934	1220	409	2340	2300	2160	2150	2100

WTR YR 1991 TOTAL 10004.0 MEAN 27.4 MAX 53 MIN 5.2 AC-FT 19840

10287650 SADDLEBAG LAKE NEAR LEE VINING, CA

LOCATION.--Lat 37°57'56", long 119°16'18", unsurveyed, T.1 N., R.24 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, near left abutment of dam on Lee Vining Creek and 8.2 mi west of Lee Vining.

DRAINAGE AREA.--16.3 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1921. Total capacity, 9,789 acre-ft between elevations 10,048.80 ft, invert of outlet, and 10,090.40 ft, crest of spillway. At times, a cofferdam 600 ft upstream affects the storage below about 800 acre-ft, due to the constriction of flow past the cofferdam. Figures given represent total contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,473 acre-ft, Sept. 10, 1991, elevation, 10,070.34 ft; minimum, 692 acre-ft, Apr. 23-30, May 3-5, 1991, elevation, 10,052.55 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Feb. 8, 1985)

10,050	217	10,070	4,392
10,055	1,163	10,080	6,890
10,060	2,172	10,091	9,968

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2541	e2374	2222	1902	1499	1193	e752	694	1442	3468	4244	4371
2	2537	e2369	2220	1892	1497	1183	e750	694	1505	3517	4253	4376
3	2528	e2355	2214	1879	1483	1212	749	692	1593	3565	4263	4387
4	2524	e2348	2199	1873	1465	1267	747	692	1704	3621	4270	4390
5	2520	e2344	2189	1861	1460	1281	737	692	1808	3689	4279	4392
6	2518	e2344	2172	1849	1444	1265	737	694	1890	3733	4284	4425
7	2513	2325	2166	1839	1432	1234	735	707	1967	3778	4289	4442
8	2509	2315	2143	1826	1420	1206	734	745	2056	3820	4293	4459
9	2499	2311	2131	1814	1418	1175	728	771	2147	3849	4298	4463
10	2492	2302	2122	1796	1398	1157	747	781	2254	3884	4300	4468
11	e2488	2296	2122	1783	1388	1128	739	787	2380	3904	4303	4466
12	e2469	2283	2116	1769	1366	1103	732	792	2518	3934	4305	4466
13	e2452	2264	2116	1749	1358	1087	720	817	2631	3969	4314	4461
14	e2435	2269	2102	1737	1344	1062	718	821	2717	3999	4319	4456
15	e2416	2271	2102	1731	1328	1045	715	827	2807	4018	4329	4454
16	2401	2273	2089	1713	1319	1010	713	852	2890	4036	4333	4452
17	2397	2264	2071	1700	1311	986	709	886	2957	4048	4343	4449
18	2397	2262	2054	1686	1295	985	705	906	3014	4064	4345	4447
19	2397	2275	2081	1678	1281	965	698	911	3082	4092	4350	4449
20	2388	2275	2079	1672	1271	938	698	927	3113	4085	4354	4449
21	2380	2264	2073	1656	1252	909	694	938	3155	4125	4359	4449
22	2376	2252	2050	1642	1240	873	694	944	3194	4131	4364	4447
23	2369	2250	2035	1630	1230	842	692	979	3245	4138	4366	4444
24	2367	2246	2019	1612	1220	825	692	1029	3283	4152	4376	4442
25	2355	2254	2000	1603	1206	838	692	1101	3307	4166	4380	4442
26	2351	2258	1988	1589	1202	810	692	1155	3345	4183	4383	4440
27	2344	2252	1961	1579	1195	781	692	1206	3374	4190	4378	4440
28	e2344	2243	1951	1559	1173	e775	692	1279	3401	4199	4373	4437
29	e2340	2225	1945	1545	---	e760	692	1336	3421	4213	4369	4437
30	e2346	2227	1926	1529	---	e758	692	1390	3439	4220	4369	4432
31	e2355	---	1914	1521	---	e756	---	1408	---	4237	4369	---
MAX	2541	2374	2222	1902	1499	1281	752	1408	3439	4237	4383	4468
MIN	2340	2225	1914	1521	1173	756	692	692	1442	3468	4244	4371
a	10060.87	10060.26	10058.75	10056.81	10055.05	---	10052.55	10056.24	10065.86	10069.34	10069.90	10070.17
b	-188	-128	-313	-393	-348	-417	-64	+716	+2031	+798	+132	+63

WTR YR 1991 MAX 4468 MIN 692 b +1889

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287700 TIOGA LAKE NEAR LEE VINING, CA

LOCATION.--Lat 37°55'41", long 119°15'01", in SE 1/4 SE 1/4 sec.19, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, at left abutment of dam on Glacier Creek and 7.4 mi west of Lee Vining.

DRAINAGE AREA.--3.67 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1928. Usable capacity, 1,254 acre-ft between elevations 9,626.72 ft, invert of outlet, and 9,650.28 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,278 acre-ft, June 13, 1991, elevation, 9,650.60 ft; minimum, 118 acre-ft, Feb. 22, 24, 25, 1991, elevation, 9,629.68 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 19, 1981)

9,626.72	0	9,640	609
9,630	131	9,646	962
9,635	356	9,652	1,383

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	798	606	147	126	123	129	175	167	624	1267	1253	1220
2	792	588	140	126	123	127	174	167	684	1270	1253	1218
3	786	571	135	127	124	136	175	168	758	1271	1253	1218
4	781	555	133	129	124	129	176	168	834	1273	1252	1220
5	775	538	131	129	124	147	175	172	895	1271	1254	1220
6	768	522	130	129	124	147	177	179	942	1269	1252	1220
7	761	505	128	128	124	150	177	187	1000	1268	1250	1220
8	754	487	128	129	124	149	177	207	1047	1265	1249	1220
9	749	471	127	128	124	149	177	218	1103	1265	1247	1219
10	743	454	127	127	124	152	177	226	1165	1267	1246	1218
11	737	438	130	127	124	153	176	229	1216	1265	1246	1217
12	732	422	130	128	123	e153	179	232	1266	1267	1246	1213
13	725	406	130	128	124	e155	178	239	1272	1265	1245	1211
14	720	390	130	129	124	e155	178	243	1268	1263	1244	1208
15	713	375	131	128	124	e157	178	251	1269	1263	1245	1208
16	706	358	130	127	123	e159	178	259	1269	1260	1244	1205
17	701	341	129	127	123	e159	178	277	1263	1257	1244	1201
18	695	324	130	127	120	e161	181	284	1263	1257	1243	1199
19	690	308	126	127	120	e163	178	287	1254	1258	1243	1196
20	684	292	128	125	119	e165	176	294	1246	1258	1241	1191
21	680	277	133	125	119	e165	174	298	1239	1257	1241	1180
22	673	262	131	124	118	e168	173	307	1234	1257	1239	1170
23	668	248	128	124	119	e168	171	334	1233	1257	1238	1160
24	661	235	129	125	118	e170	169	375	1226	1252	1236	e1146
25	659	211	129	125	118	e170	170	421	1224	1252	1234	e1135
26	650	210	128	123	119	e172	170	457	1228	1251	1232	e1124
27	643	198	129	125	119	e174	168	487	1233	1254	1230	e1113
28	637	186	128	124	123	174	167	521	1239	1254	1227	e1098
29	631	172	128	123	---	174	167	552	1244	1252	1225	e1091
30	624	158	127	123	---	174	167	573	1254	1253	1223	e1084
31	617	---	126	122	---	173	---	588	---	1254	1222	---
MAX	798	606	147	129	124	174	181	588	1272	1273	1254	1220
MIN	617	158	126	122	118	127	167	167	624	1251	1222	1084
a	9640.15	9630.63	9629.87	9629.79	9629.80	9630.98	9630.83	9639.60	9650.28	9650.27	9649.83	9647.85
b	-186	-459	-32	-4	+1	+50	-6	+421	+666	0	-32	-138

WTR YR 1991 MAX 1273 MIN 118 b +281

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287760 ELLERY LAKE NEAR LEE VINING, CA

LOCATION.--Lat 37°56'08", long 119°13'50", in SW 1/4 NW 1/4 sec.21, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in valve house at base of Rhinedollar Dam on Lee Vining Creek and 6.3 mi west of Lee Vining.

DRAINAGE AREA.--16.7 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1927. Usable capacity, 493 acre-ft between elevations 9,478.53 ft, invert of outlet, and 9,492.53 ft, crest of spillway. Radial gates are occasionally closed, increasing elevation to 9,496.53 ft and capacity to 749 acre-ft. Lake receives water from Saddlebag and Tioga Lakes (stations 10287650 and 10287700) and releases it via Poole powerplant conduit to Poole powerplant. Figures given represent usable contents.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 537 acre-ft, June 12, 1991, elevation, 9,493.24 ft; minimum, 365 acre-ft, Oct. 26, 1990, elevation, 9,490.35 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 18, 1981)

9,485	96	9,493	522
9,489	290	9,497	780

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	447	395	440	455	444	453	406	441	452	482	426	421
2	451	404	443	460	445	446	405	437	463	450	426	422
3	455	414	448	463	446	451	404	421	495	451	424	425
4	456	424	453	463	447	440	403	422	507	455	423	429
5	453	439	452	462	447	416	404	426	498	459	421	438
6	452	449	447	461	447	411	406	440	481	423	421	453
7	450	455	446	459	447	420	406	442	474	401	420	462
8	448	457	442	457	447	442	406	396	463	424	419	462
9	447	459	439	457	447	455	406	413	469	440	417	447
10	446	460	442	459	447	457	405	436	517	438	420	440
11	445	460	442	457	429	448	404	427	532	425	420	440
12	442	460	442	459	427	441	403	426	537	422	423	439
13	440	459	437	462	433	436	404	424	526	438	426	436
14	441	457	433	463	440	430	402	418	504	433	428	435
15	441	453	430	462	444	428	401	434	500	421	429	435
16	440	454	429	460	453	430	399	448	493	414	434	435
17	440	453	429	458	455	436	398	409	471	413	436	435
18	442	452	431	456	456	443	396	410	453	421	438	435
19	427	452	436	455	457	442	395	434	437	430	438	434
20	406	448	429	455	455	440	398	435	404	433	438	434
21	387	445	434	454	455	440	400	426	399	424	438	440
22	377	443	434	455	452	434	404	437	410	419	437	441
23	374	441	438	457	449	436	411	453	424	419	435	447
24	375	440	444	458	450	436	416	424	419	422	433	451
25	372	440	447	457	452	440	423	442	399	427	432	453
26	365	438	448	457	453	440	426	420	393	429	430	456
27	372	442	452	456	456	436	429	453	409	426	427	457
28	373	437	453	456	453	431	434	477	405	426	424	459
29	374	439	453	455	---	425	440	449	408	425	423	462
30	376	441	455	454	---	417	447	394	430	423	422	462
31	381	---	455	444	---	412	---	404	---	425	421	---
MAX	456	460	455	463	457	457	447	477	537	482	438	462
MIN	365	395	429	444	427	411	395	394	393	401	417	421
a	9490.63	9491.66	9491.90	9491.71	9491.86	9491.17	9491.77	9491.03	9491.48	9491.39	9491.32	9492.02
b	-68	+60	+14	-11	+9	-41	+35	-43	+26	-5	-4	+41

WTR YR 1991 MAX 537 MIN 365 b +13

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10287770 LEE VINING CREEK BELOW RHINEDOLLAR DAM, NEAR LEE VINING, CA

LOCATION.--Lat 37°56'10", long 119°13'48", in SW 1/4 NW 1/4 sec.21, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank 100 ft downstream from Rhinedollar Dam spillway and 6.3 mi west of Lee Vining.

DRAINAGE AREA.--16.7 mi².

PERIOD OF RECORD.--October 1990 to September 1991. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 9,450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated for power development by Saddlebag, Tioga, and Ellery Lakes (stations 10287650, 10287700, and 10287760). Most of the water is diverted at Ellery Lake to Poole powerplant via Poole powerplant conduit intake.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44 ft³/s, June 12, 1991, gage height, 1.07 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	22	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	26	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	8.4	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.46	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	2.2	.00	.00	.00
11	.00	.00	.00	.00	e4.2	.00	.00	.00	e5.0	.00	.00	.00
12	.00	.00	.00	.00	e6.9	.00	.00	.00	35	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	32	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	16	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	5.9	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	e3.0	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	e3.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	e8.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	e8.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	e8.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	e8.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	e8.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	e8.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	e7.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	e6.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	e6.0	.00	.00	.00	.00	.00	.00	.46	.00	.00	.00	.00
29	e6.0	.00	.00	.00	---	.00	.00	.97	.00	.00	.00	.00
30	e6.0	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	e3.7	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	86.10	0.00	0.00	0.00	11.10	0.00	0.00	1.43	157.06	0.00	0.00	0.00
MEAN	2.78	.000	.000	.000	.40	.000	.000	.046	5.24	.000	.000	.000
MAX	8.0	.00	.00	.00	6.9	.00	.00	.97	35	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	171	.00	.00	.00	22	.00	.00	2.8	312	.00	.00	.00
a	497	748	668	702	534	1060	620	2290	4590	2580	774	651

WTR YR 1991 TOTAL 255.69 MEAN .70 MAX 35 MIN .00 AC-FT 507 a 15710

e Estimated.

a Diversion, in acre-feet, to Poole powerplant, provided by Southern California Edison Co.

TIJUANA RIVER BASIN

11011000 BARRETT LAKE NEAR DULZURA, CA

LOCATION.--Lat 32°30'46", long 116°40'11", in NW 1/4 NW 1/4 sec.22, T.17 S., R.3 E., San Diego County, Hydrologic Unit 18070305, on Barrett Dam outlet tower, 7.2 mi downstream from Morena Reservoir, and 7.0 mi northeast of Dulzura.

DRAINAGE AREA.--245 mi².

PERIOD OF RECORD.--October 1960 to September 1966 (monthend contents only, published in WSP 1928), published as Cottonwood Creek at Barrett Dam. October 1986 to current year (October 1986 to June 1988, monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of San Diego). Prior to July 6, 1988, nonrecording gage. Prior to September 1966, at datum 1,446.12 ft higher.

REMARKS.--Reservoir is formed by gravity-concrete and masonry dam built in 1922. Total capacity at top of flash gates on spillway, 44,760 acre-ft, elevation, 1,615.00 ft. Capacity at permanent spillway level, 37,950 acre-ft, elevation, 1,607.00 ft. Dead storage below lowest outlet, 719 acre-ft, elevation, 1,505.00 ft. Water from Barrett Lake is diverted out of basin to Lower Otay Lake (station 11014550) by Dulzura conduit for municipal use.

COOPERATION.--Reservoir daily elevations for Oct. 1 to Jan. 23, Feb. 23 to May 29, provided by city of San Diego.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 22,110 acre-ft, Oct. 1, 1986, elevation, 1,584.38 ft; minimum, 4,690 acre-ft, Nov. 4-20, 1990, elevation, 1,538.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,500 acre-ft, May 4 to June 20, elevation, 1,574.10 ft; minimum, 4,690 acre-ft, Nov. 4-20, elevation, 1,538.70 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table dated Mar. 27, 1956)

1,530	3,140	1,560	10,600	1,590	25,600
1,540	4,960	1,570	14,600	1,600	32,500
1,550	7,420	1,580	19,600	1,615	44,800

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5430	e4710	e4710	e4750	4780	e6930	e14900	e16400	16500	16400	16200	15900
2	e5400	e4710	e4710	e4750	4790	e8630	e15000	e16400	16500	16400	16200	15900
3	e5380	e4710	e4710	e4770	4790	e8910	e15200	e16400	16500	16400	16200	15900
4	e5330	e4690	e4710	e4770	4800	e9080	e15300	e16500	16500	16400	16200	15900
5	e5310	e4690	e4710	e4790	4790	e9240	e15400	e16500	16500	16400	16200	15900
6	e5290	e4690	e4710	e4790	4790	e9340	e15600	e16500	16500	16400	16200	15900
7	e5240	e4690	e4710	e4790	4800	e9470	e15600	e16500	16500	16400	16100	15900
8	e5220	e4690	e4710	e4790	4790	e9570	e15700	e16500	16500	16400	16100	15900
9	e5180	e4690	e4710	e4790	4790	e9670	e15800	e16500	16500	16300	16100	15900
10	e5160	e4690	e4710	e4790	4800	e9740	e15900	e16500	16500	16300	16100	15900
11	e5110	e4690	e4710	e4790	4800	e9810	e15900	e16500	16500	16300	16100	15900
12	e5090	e4690	e4710	e4790	4790	e9880	e15900	e16500	16500	16300	16100	15900
13	e5070	e4690	e4710	e4790	4800	e9940	e16000	e16500	16500	16300	16100	15900
14	e5030	e4690	e4710	e4810	4800	e9980	e16000	e16500	16500	16300	16100	15900
15	e5000	e4690	e4710	e4810	4800	e10000	e16000	e16500	16500	16300	16100	15800
16	e4980	e4690	e4730	e4810	4830	e10100	e16100	e16500	16500	16300	16100	15900
17	e4940	e4690	e4730	e4810	4900	e10200	e16100	e16500	16500	16300	16100	15800
18	e4920	e4690	e4730	e4810	5020	e10200	e16100	e16500	16500	16300	16100	15800
19	e4900	e4690	e4730	e4810	5170	e10200	e16100	e16500	16500	16300	16100	15800
20	e4850	e4690	e4730	e4810	5310	e10400	e16200	e16500	16500	16200	16000	15800
21	e4830	e4710	e4750	e4810	5450	e10800	e16200	e16500	16400	16200	16000	15800
22	e4790	e4710	e4750	e4810	5600	e11200	e16200	e16500	16400	16200	16000	15800
23	e4790	e4710	e4750	e4810	e5700	e11500	e16300	e16500	16400	16200	16000	15800
24	e4790	e4710	e4770	4790	e5820	e11700	e16300	e16500	16400	16200	16000	15800
25	e4790	e4710	e4770	4790	e5960	e11800	e16300	e16500	16400	16200	16000	15800
26	e4750	e4710	e4770	4790	e6080	e12100	e16300	e16500	16400	16200	16000	15800
27	e4750	e4710	e4750	4800	e6180	e12700	e16400	e16500	16400	16200	16000	15800
28	e4730	e4710	e4750	4800	e6380	e13700	e16400	e16500	16400	16200	16000	15800
29	e4730	e4710	e4750	4790	---	e14100	e16400	e16500	16400	16200	16000	15800
30	e4730	e4710	e4750	4790	---	e14400	e16400	16500	16400	16200	16000	15800
31	e4710	---	e4750	4790	---	e14700	---	16500	---	16200	16000	---
MAX	5430	4710	4770	4810	6380	14700	16400	16500	16500	16400	16200	15900
MIN	4710	4690	4710	4750	4780	6930	14900	16400	16400	16200	16000	15800
a	e1538.84	e1538.84	e1539.06	1539.33	e1546.10	e1570.00	e1573.78	1574.08	1573.86	1573.43	1572.92	1572.59
b	-780	0	+40	+40	+1590	+8320	+1700	+100	-100	-200	-200	-200

CAL YR 1990 MAX 11400 MIN 4690 b -1810
WTR YR 1991 MAX 16500 MIN 4690 b +10310

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

TIJUANA RIVER BASIN

11012000 COTTONWOOD CREEK ABOVE TECATE CREEK, NEAR DULZURA, CA

LOCATION.--Lat 32°34'30", long 116°45'11", in NW 1/4 SW 1/4 sec.26, T.18 S., R.2 E., San Diego County, Hydrologic Unit 18070305, on right bank 0.8 mi upstream from confluence with Tecate Creek, 5.1 mi south of Dulzura, and 11.3 mi downstream from Barrett Lake.

DRAINAGE AREA.--310 mi².

PERIOD OF RECORD.--October 1936 to current year.

REVISED RECORDS.--WSP 1245: 1937-1938. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 569.40 ft above National Geodetic Vertical Datum of 1929 (Levels by International Boundary and Water Commission).

REMARKS.--Records fair. Flow regulated by Morena Reservoir, capacity, 50,210 acre-ft, and Barrett Lake (station 11011000), capacity, 44,760 acre-ft. Water diverted from Barrett Lake through San Diego and Dulzura conduits to Lower Otay Lake (station 11014550).

AVERAGE DISCHARGE.--55 years, 13.8 ft³/s, 10,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s, Feb. 21, 1980, gage height, 11.15 ft, from rating curve extended above 8,700 ft³/s; no flow for part of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 961 ft³/s, Mar. 27, gage height, 6.18 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	211	44	1.7	.17	.00	.00	.00
2	.00	.00	.00	.00	.00	54	36	1.5	.14	.00	.00	.00
3	.00	.00	.00	.00	.00	11	31	1.4	.12	.00	.00	.00
4	.00	.00	.00	.00	.00	5.9	26	1.3	.11	.00	.00	.00
5	.00	.00	.00	.00	.00	3.9	22	.99	.11	.00	.00	.00
6	.00	.00	.00	.00	.00	2.8	20	.82	.10	.00	.00	.00
7	.00	.00	.00	.00	.00	2.1	17	e.75	.05	.00	.00	.00
8	.00	.00	.00	.00	.00	1.5	15	e.70	.01	.00	.00	.00
9	.00	.00	.00	.00	.00	1.2	14	e.65	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	1.0	12	e.60	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	1.2	11	e.58	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	1.0	9.7	e.56	.01	.00	.00	.00
13	.00	.00	.00	.00	.00	1.2	9.0	e.54	.01	.00	.00	.00
14	.00	.00	.00	.00	.00	1.6	8.2	e.52	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	1.8	7.5	e.50	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	1.5	7.0	e.48	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.94	6.2	e.44	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.78	5.6	.35	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	8.0	4.9	.34	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	28	4.6	.33	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	202	4.5	.31	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	95	4.3	.31	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	43	4.3	.31	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	27	4.6	.28	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	28	4.5	.25	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	156	4.1	.21	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	604	3.6	.18	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	315	3.0	.17	.00	.00	.00	.00
29	.00	.00	.00	.00	---	136	2.4	.16	.00	.00	.00	.00
30	.00	.00	.00	.00	---	87	1.9	.16	.00	.00	.00	.00
31	.00	---	.00	.00	---	56	---	.20	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	2089.42	347.9	17.59	0.83	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	67.4	11.6	.57	.028	.000	.000	.000
MAX	.00	.00	.00	.00	.00	604	44	1.7	.17	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.78	1.9	.16	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	4140	690	35	1.6	.00	.00	.00

CAL YR 1990 TOTAL 0.93 MEAN .003 MAX .16 MIN .00 AC-FT 1.8
WTR YR 1991 TOTAL 2455.74 MEAN 6.73 MAX 604 MIN .00 AC-FT 4870

e Estimated.

TIJUANA RIVER BASIN

127

11012500 CAMPO CREEK NEAR CAMPO, CA

LOCATION.--Lat 32°35'28", long 116°31'29", in NE 1/4 SE 1/4 sec.24, T.18 S., R.4 E., San Diego County, Hydrologic Unit 18070305, on left bank just upstream from bridge on State Highway 94 and 3.5 mi southwest of Campo.

DRAINAGE AREA.--85.0 mi², of which 3 mi² are in Mexico.

PERIOD OF RECORD.--October 1936 to current year.

REVISED RECORDS.--WSP 1635: 1937-38(M), 1940(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 2,178.92 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1954, at datum 1 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Peaks are attenuated by small conservation reservoir 1 mi upstream since August 1956. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--55 years, 3.14 ft³/s, 2,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 895 ft³/s, Mar. 24, 1983, gage height, 5.39 ft, from rating curve extended above 340 ft³/s; no flow for part of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 521 ft³/s, Mar. 27, gage height, 3.50 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.10	.16	181	6.1	1.8	.63	.58	.36	.21
2	.00	.00	.00	.10	.18	16	5.4	1.8	.55	.52	.28	.20
3	.00	.00	.00	.13	.19	2.2	4.5	1.9	.52	.53	.24	.19
4	.00	.00	.00	.16	.20	.50	3.8	1.7	.52	.54	.24	.21
5	.00	.00	.00	.13	.21	.42	3.4	1.5	.53	.50	.25	.24
6	.00	.00	.00	.11	.22	.39	3.1	1.5	.53	.54	.24	.22
7	.00	.00	.00	.11	.22	.37	2.9	1.4	.51	.55	.22	.22
8	.00	.00	.00	.11	.22	.34	2.6	1.3	.52	.52	.21	.21
9	.00	.00	.00	.15	.22	.32	2.4	1.4	.54	.48	.20	.25
10	.00	.00	.00	.13	.22	.32	2.4	1.5	.52	.45	.21	.27
11	.00	.00	.00	.12	.22	.34	2.4	1.4	.59	.44	.22	.27
12	.00	.00	.05	.11	.22	.32	2.2	1.3	.53	.40	.24	.29
13	.00	.00	.07	.11	.24	.34	2.1	1.3	.55	.34	.24	.30
14	.00	.00	.08	.11	.24	.36	2.2	1.4	.58	.33	.25	.27
15	.00	.00	.09	.11	.26	.47	2.1	1.2	.58	.33	.25	.23
16	.00	.00	.10	.11	.28	.38	2.0	1.0	.56	.32	.24	.20
17	.00	.00	.09	.10	.32	.35	2.0	.94	.49	.37	.25	.19
18	.00	.00	.10	.10	.32	.35	2.0	.96	.50	.38	.24	.20
19	.00	.00	.12	.11	.29	3.8	1.9	.94	.53	.38	.24	.22
20	.00	.00	.22	.11	.29	15	1.9	.99	.53	.37	.23	.24
21	.00	.00	.18	.11	.29	40	1.9	1.0	.56	.35	.22	.29
22	.00	.00	.13	.11	.29	9.8	1.9	.97	.53	.34	.21	.26
23	.00	.00	.11	.12	.31	5.9	1.9	.80	.55	.32	.21	.25
24	.00	.00	.10	.12	.32	4.3	2.0	.65	.60	.29	.20	.21
25	.00	.00	.10	.12	.29	4.9	1.9	.63	.62	.29	.20	.19
26	.00	.00	.10	.13	.32	157	1.9	.63	.64	.27	.20	.19
27	.00	.00	.10	.14	.49	326	1.9	.64	.66	.23	.21	.20
28	.00	.00	.10	.15	2.1	71	1.7	.63	.63	.19	.21	.20
29	.00	.00	.10	.15	---	17	1.7	.61	.64	.19	.18	.20
30	.00	.00	.10	.15	---	9.8	1.6	.68	.60	.21	.19	.18
31	.00	---	.10	.15	---	7.1	---	.70	---	.88	.19	---
TOTAL	0.00	0.00	2.14	3.77	9.13	876.37	75.8	35.17	16.84	12.43	7.07	6.80
MEAN	.000	.000	.069	.12	.33	28.3	2.53	1.13	.56	.40	.23	.23
MAX	.00	.00	.22	.16	2.1	326	6.1	1.9	.66	.88	.36	.30
MIN	.00	.00	.00	.10	.16	.32	1.6	.61	.49	.19	.18	.18
AC-FT	.00	.00	4.2	7.5	18	1740	150	70	33	25	14	13

CAL YR 1990 TOTAL 25.53 MEAN .070 MAX .39 MIN .00 AC-FT 51
WTR YR 1991 TOTAL 1045.52 MEAN 2.86 MAX 326 MIN .00 AC-FT 2070

OTAY RIVER BASIN

11014000 JAMUL CREEK NEAR JAMUL, CA

LOCATION.--Lat 32°38'15", long 116°53'00", in NW 1/4 NE 1/4 sec.4, T.18 S., R.1 E., San Diego County, Hydrologic Unit 18070304, on right bank 300 ft upstream from Otay Road crossing at upper end of Lower Otay Lake, 1.4 mi downstream from Dulzura Creek, and 5.5 mi south of Jamul.

DRAINAGE AREA.--70.2 mi².

PERIOD OF RECORD.--April 1940 to September 1978, October 1985 to current year.

REVISED RECORDS.--WSP 1565: 1952, 1954. WSP 1715: 1944, 1946. WDR CA-73-1: Drainage area.

GAGE.--Water-stage recorder and broad-crested weir control with low-water venturi-type flume. Datum of gage is 511.64 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1951, at datum 1.00 ft higher.

REMARKS.--Records good except for discharges below 0.5 ft³/s, which are poor. No regulation upstream from station. Water is diverted from Cottonwood Creek at Barrett Lake (station 11011000) via San Diego and Dulzura conduit into Dulzura Creek, a tributary to Jamul Creek, and is included in discharge for this station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s, Dec. 1, 1947, gage height, 6.42 ft, present datum, from rating curve extended above 1,200 ft³/s; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0830	*2,340	*5.03	Mar. 27	0530	2,020	4.78
Mar. 21	0415	1,150	4.19				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	2.2	e.06	e.06	.25	521	e35	1.7	.87	.00	.00	.00
2	13	1.9	e.06	e.06	.25	e40	e27	1.6	.70	.00	.00	.00
3	13	1.7	e.06	e.39	.25	e21	e23	1.5	.81	.00	.00	.00
4	13	1.6	e.06	.96	.28	e16	19	1.6	.37	.00	.00	.00
5	13	1.4	e.06	.58	.30	15	14	1.5	.45	.00	.00	.00
6	13	1.3	e.06	.58	.25	15	12	3.0	.32	.00	.00	.00
7	13	1.2	e.06	.43	.25	14	11	1.2	1.1	.00	.00	.00
8	13	1.0	e.06	.32	.25	14	10	1.2	.91	.00	.00	.00
9	12	e.70	e.06	.59	.25	13	9.1	1.1	.28	.00	.00	.00
10	12	e.50	e.06	.43	.23	13	8.2	1.1	.25	.00	.00	.00
11	12	e.30	e.06	.25	.15	13	7.4	1.1	.25	.00	.00	.00
12	12	e.20	e.06	.25	e.12	13	6.4	.95	.25	.00	.00	.00
13	13	e.10	e.06	.25	e.11	15	5.8	.84	.19	.00	.00	.00
14	12	e.08	e.06	.25	e.10	18	5.4	.75	.19	.00	.00	.00
15	12	e.08	e.06	.25	e.11	22	5.1	.74	.15	.00	.00	.00
16	14	e.07	e.06	.30	.13	22	4.6	.66	.15	.00	.00	.00
17	14	e.07	e.06	.32	.17	18	4.2	.64	.11	.00	.00	.00
18	14	e.07	e.06	.32	.20	17	4.0	.55	.10	.00	.00	.00
19	13	e.07	e.06	.26	.20	57	3.8	.57	.08	.00	.00	.00
20	12	e.20	e.30	.18	.19	197	3.4	.48	.10	.00	.00	.00
21	10	e.06	e.06	.19	.17	682	3.5	.41	.05	.00	.00	.00
22	8.8	e.06	e.06	.19	.20	102	3.3	.46	e.02	.00	.00	.00
23	7.2	e.06	e.06	.20	.23	e42	3.1	.43	e.00	.00	.00	.00
24	6.1	e.06	e.06	.19	.23	e26	3.1	.47	e.00	.00	.00	.00
25	5.4	e.06	e.06	.19	.22	e33	3.2	.52	e.00	.00	.00	.00
26	4.8	e.06	e.06	.22	.25	293	3.0	.52	e.00	.00	.00	.00
27	4.1	e.06	e.06	.25	.57	1040	2.6	.56	e.00	.00	.00	.00
28	3.5	e.06	e.06	.28	16	189	2.4	.58	e.00	.00	.00	.00
29	3.0	e.06	e.06	.29	---	93	2.1	.66	e.00	.00	.00	.00
30	2.8	e.06	e.06	.25	---	e64	1.8	.82	.00	.00	.00	.00
31	2.6	---	e.06	.25	---	e45	---	1.1	---	.00	.00	---
TOTAL	314.3	15.34	2.10	9.53	21.91	3683	246.5	29.31	7.70	0.00	0.00	0.00
MEAN	10.1	.51	.068	.31	.78	119	8.22	.95	.26	.000	.000	.000
MAX	14	2.2	.30	.96	.16	1040	35	3.0	1.1	.00	.00	.00
MIN	2.6	.06	.06	.06	.10	13	1.8	.41	.00	.00	.00	.00
AC-FT	623	30	4.2	19	43	7310	489	58	15	.00	.00	.00

CAL YR 1990 TOTAL 2570.96 MEAN 7.04 MAX 20 MIN .06 AC-FT 5100
WTR YR 1991 TOTAL 4329.69 MEAN 11.9 MAX 1040 MIN .00 AC-FT 8590

e Estimated.

11014550 LOWER OTAY LAKE NEAR CHULA VISTA, CA

LOCATION.--Lat 32°36'33", long 116°55'38", in NE 1/4 NE 1/4 sec.13, T.18 S., R.1 E., San Diego County, Hydrologic Unit 18070304, on right bank, 30 ft west of right end of Savage Dam on Otay River, and 9.0 mi east of Chula Vista.

DRAINAGE AREA.--99.0 mi².

PERIOD OF RECORD.--October 1945 to September 1959 (published with Otay River at Savage Dam, station 11014500), October 1972 to current year. Prior to October 1987 monthend contents only. Monthend gage heights October 1936 to September 1945, in files of San Diego County Department of Sanitation and Flood Control.

REVISED RECORD.--WDR CA-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by county of San Diego). October 1972 to current year, supplementary water-stage recorder for flood warning only, on right bank 30 ft upstream from dam at datum 397.20 ft higher.

REMARKS.--Reservoir is formed by gravity section concrete and masonry dam, built in 1919. Maximum capacity at top of spillway gates, 56,520 acre-ft, elevation, 490.70 ft. Capacity at permanent spillway level, 49,510 acre-ft, elevation, 484.70 ft. Dead storage below lowest outlet, 1,150 acre-ft, elevation, 395.05 ft. Dulzura conduit carries water from Barrett Lake (station 11011000) to Dulzura Creek, where water is carried to the reservoir by Jamul Creek (station 11014000). Reservoir storage includes supplemental Colorado River water. Small diversions for local use near reservoir. Water used for municipal supply by city of San Diego.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 51,860 acre-ft, spilling, Mar. 3, 1983, elevation, 486.78 ft; minimum observed, 3,160 acre-ft, Dec. 31, 1951, elevation, 407.56 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 48,610 acre-ft, Apr. 18, 19, elevation, 483.89 ft; minimum, 37,150 acre-ft, Jan. 9, elevation, 472.34 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey dated Apr. 3, 1956)

430	10,090	445	17,340	470	35,100
435	12,250	450	20,280	480	44,500
440	14,660	460	27,060	489	54,460

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39290	39030	38460	37340	37510	39020	46990	48130	46880	45990	44110	42440
2	39240	39000	38460	37290	37500	39160	47090	48100	46820	45920	44080	42370
3	39190	38960	38450	37320	37500	39260	47190	48080	46760	45850	44040	42320
4	39120	38910	38430	37300	37520	39330	47320	48040	46680	45800	44000	42290
5	39060	38870	38390	37280	37530	39410	47480	48030	46620	45750	43930	42250
6	38990	38840	38390	37240	37560	39480	47590	47990	46540	45670	43880	42200
7	38920	38790	38360	37200	37570	39530	47730	47960	46460	45600	43820	42150
8	38850	38750	38330	37160	37590	39580	47860	47920	46380	45570	43750	42110
9	38860	38720	38290	37170	37590	39640	48010	47850	46320	45500	43750	42040
10	38890	38690	38240	37210	37580	39690	48100	47820	46240	45410	43670	41940
11	38920	38660	38230	37230	37570	39760	48170	47760	46210	45360	43620	41880
12	38980	38620	38200	37270	37570	39800	48260	47730	46170	45300	43540	41830
13	39020	38570	38190	37300	37580	39870	48330	47710	46150	45210	43470	41800
14	39070	38550	38160	37330	37610	39940	48410	47660	46080	45180	43420	41750
15	39120	38520	38120	37340	37620	40060	48470	47640	46040	45110	43390	41730
16	39170	38500	38090	37360	37640	40130	48530	47590	46040	45030	43340	41690
17	39200	38480	38020	37380	37670	40190	48580	47550	45980	44950	43300	41650
18	39220	38470	37970	37390	37690	40250	48610	47500	45920	44930	43230	41590
19	39280	38470	37900	37420	37720	40470	48580	47470	45880	44810	43170	41540
20	39340	38490	37870	37430	37740	40970	48550	47420	45890	44740	43100	41490
21	39370	38480	37830	37450	37730	42250	48520	47360	45910	44720	43060	41470
22	39350	38490	37760	37460	37720	42660	48470	47330	45910	44630	43010	41430
23	39330	38470	37720	37460	37740	42830	48440	47300	45920	44580	42930	41380
24	39310	38460	37660	37440	37720	42920	48410	47260	45940	44500	42890	41330
25	39250	38460	37650	37410	37700	43080	48390	47210	45940	44440	42850	41270
26	39230	38470	37610	37430	37730	43900	48350	47170	45960	44410	42780	41210
27	39170	38480	37580	37430	37880	45690	48310	47120	45960	44330	42740	41140
28	39140	38470	37530	37460	38130	46280	48270	47050	45980	44280	42670	41090
29	39110	38450	37480	37490	---	46560	48260	47020	45980	44240	42600	41030
30	39080	38450	37450	37510	---	46760	48200	46950	46000	44190	42550	40990
31	39060	---	37390	37510	---	46890	---	46920	---	44140	42490	---
MAX	39370	39030	38460	37510	38130	46890	48610	48130	46880	45990	44110	42440
MIN	38850	38450	37390	37160	37500	39020	46990	46920	45880	44140	42490	40990
a	474.42	473.77	472.61	472.74	473.42	482.30	483.52	482.33	481.46	479.65	478.01	476.47
b	-310	-610	-1060	+120	+620	+8760	+1310	-1280	-920	-1860	-1650	-1500
CAL YR 1990	MAX 41170	MIN 37390	b -2360									
WTR YR 1991	MAX 48610	MIN 37160	b +1620									

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

SWEETWATER RIVER BASIN

11015000 SWEETWATER RIVER NEAR DESCANSO, CA

LOCATION.--Lat 32°50'05", long 116°37'20", in NW 1/4 SE 1/4 sec.25, T.15 S., R.3 E., San Diego County, Hydrologic Unit 18070304, near right bank at Los Terrenitos Road bridge, 0.7 mi downstream from unnamed tributary, and 1.3 mi south of Descanso.

DRAINAGE AREA.--45.4 mi².

PERIOD OF RECORD.--October 1905 to September 1927 (monthly discharge only for some months, published in WSP 1315-B), October 1956 to current year. Prior to October 1927, records unadjusted for diversion. October 1956 to September 1977, both unadjusted records and combined records of river plus diversion (station 11015001) were published. No diversion since November 1976.

REVISED RECORD.--WSP 1315-B: 1922(M). WDR CA-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,269.24 ft above National Geodetic Vertical Datum of 1929. Prior to June 25, 1927, nonrecording gages at several sites and datums, upstream about 0.1 mi. Diversion gage at site 0.3 mi upstream, October 1956 to September 1984, at different datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--35 years (water years 1957-91), 8.32 ft³/s, 6,030 acre-ft/yr, adjusted for periods of diversion.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 11,200 ft³/s, Feb. 16, 1927, gage height, 13.2 ft, from floodmarks, site and datum then in use, on basis of slope-area measurement of peak flow; no flow many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1500	*1,340	*8.39	Mar. 22	1230	137	6.07
Mar. 27	0600	567	7.68				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.02	633	84	6.8	2.1	.68	.04	.00
2	.00	.00	.00	.00	.02	108	70	6.6	1.9	.54	.02	.00
3	.00	.00	.00	.00	.03	15	63	6.2	1.8	.46	.01	.00
4	.00	.00	.00	.00	.03	6.6	53	5.6	1.7	.43	.00	.00
5	.00	.00	.00	.00	.03	2.9	46	5.0	1.5	.37	.00	.00
6	.00	.00	.00	.00	.03	1.8	39	4.6	1.4	.40	.01	.00
7	.00	.00	.00	.00	.03	1.1	33	4.6	1.4	.48	.00	.00
8	.00	.00	.00	.00	.03	.93	27	4.3	1.4	.68	.00	.00
9	.00	.00	.00	.00	.03	.81	23	4.2	1.4	.49	.00	.00
10	.00	.00	.00	.00	.03	.70	21	4.1	1.3	.40	.00	.00
11	.00	.00	.00	.00	.03	.70	20	4.4	1.3	.35	.00	.00
12	.00	.00	.00	.00	.03	.52	17	5.5	1.3	.28	.00	.00
13	.00	.00	.00	.00	.03	.81	15	5.9	1.2	.17	.00	.00
14	.00	.00	.00	.00	.03	1.6	14	6.0	1.2	.11	.00	.00
15	.00	.00	.00	.00	.04	2.9	14	5.9	1.2	.07	.00	.00
16	.00	.00	.00	.00	.04	1.9	13	5.7	1.2	.04	.00	.00
17	.00	.00	.00	.00	.04	1.4	12	5.7	1.1	.05	.00	.00
18	.00	.00	.00	.00	.04	1.3	11	5.7	1.1	.04	.00	.00
19	.00	.00	.00	.00	.03	26	11	5.6	1.1	.03	.00	.00
20	.00	.00	.00	.00	.03	45	9.8	5.4	1.1	.04	.00	.00
21	.00	.00	.00	.00	.04	46	9.0	3.8	1.1	.04	.00	.30
22	.00	.00	.00	.00	.04	67	8.9	2.9	1.1	.02	.00	.00
23	.00	.00	.00	.00	.04	55	8.9	2.5	1.0	.01	.00	.00
24	.00	.00	.00	.00	.04	38	8.7	2.4	1.1	.00	.00	.00
25	.00	.00	.00	.00	.04	66	8.8	2.3	1.2	.00	.00	.00
26	.00	.00	.00	.00	.05	98	9.2	2.3	1.2	.00	.00	.00
27	.00	.00	.00	.00	.48	239	8.7	2.2	1.1	.00	.00	.00
28	.00	.00	.00	.00	8.7	87	8.0	2.2	1.1	.00	.00	.00
29	.00	.00	.00	.00	---	82	7.3	2.2	1.0	.00	.00	.00
30	.00	.00	.00	.00	---	76	7.0	2.3	.87	.00	.00	.00
31	.00	---	.00	.01	---	85	---	2.3	---	.04	.00	---
TOTAL	0.00	0.00	0.00	0.01	10.05	1791.97	680.3	135.2	38.47	6.22	0.08	0.30
MEAN	.000	.000	.000	.000	.36	57.8	22.7	4.36	1.28	.20	.003	.010
MAX	.00	.00	.00	.01	8.7	633	84	6.8	2.1	.68	.04	.30
MIN	.00	.00	.00	.00	.02	.52	7.0	2.2	.87	.00	.00	.00
AC-FT	.00	.00	.00	.02	20	3550	1350	268	76	12	.2	.6
CAL YR 1990	TOTAL	22.20	MEAN	.061	MAX	1.7	MIN	.00	AC-FT	44		
WTR YR 1991	TOTAL	2662.60	MEAN	7.29	MAX	633	MIN	.00	AC-FT	5280		

11020600 EL CAPITAN LAKE NEAR LAKESIDE, CA

LOCATION.--Lat 32°52'56", long 116°48'30", in SE 1/4 NE 1/4 sec.7, T.15 S., R.2 E., San Diego County, Hydrologic Unit 18070304, on left bank 100 ft upstream from El Capitan Dam on San Diego River and 7.0 mi east of Lakeside.

DRAINAGE AREA.--188 mi².

PERIOD OF RECORD.--October 1936 to September 1966 (published with San Diego River at El Capitan Dam, station 11020500), October 1972 to current year. Monthend contents only October 1972 to September 1987. October 1936 to September 1945, published in WSP 1315-B, not equivalent owing to exclusion of greater part of flow released from Cuyamaca Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of San Diego). Prior to October 1987, nonrecording gage at same site.

REMARKS.--Reservoir is formed by hydraulic fill-rock embankment, completed in 1935. Capacity of reservoir at spillway level, 112,810 acre-ft, elevation, 750.00 ft. Dead storage below lowest outlet, 59 acre-ft, elevation, 574.00 ft. Reservoir storage includes supplemental Colorado River water. No significant diversion upstream from reservoir. Inflow partly regulated by Cuyamaca Reservoir, capacity, 11,760 acre-ft. Water is released as required for municipal use and irrigation.

COOPERATION.--Daily elevation records, May 23-31, provided by city of San Diego.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 114,500 acre-ft, spilling, Mar. 7, 1980, elevation, 751.09 ft; minimum observed, 2,252 acre-ft, May 1, 1957, elevation, 606.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 62,980 acre-ft, Aug. 2, elevation, 712.18 ft; minimum, 41,270 acre-ft, Dec. 19, elevation, 689.38 ft.

Capacity table (elevation in feet, and contents, in acre-feet)
(Based on table dated May 25, 1956)

600	1,450	640	11,310	700	50,730
610	2,820	650	15,530	720	71,790
620	4,940	660	20,650	740	97,790
630	7,820	680	33,780	753	117,550

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47060	44140	41420	41330	42540	47140	54840	57270	59300	61970	62880	62310
2	47060	43990	41420	41320	42600	47620	55030	57320	59440	62040	62860	62300
3	47050	43870	41390	41340	42650	47760	55240	57390	59520	62040	62840	62280
4	47050	43760	41390	41350	42720	47830	55410	57470	59690	62000	62810	62260
5	47040	43620	41390	41380	42770	47890	55560	57490	59760	62000	62780	62280
6	47010	43510	41380	41360	42800	47940	55690	57520	59810	61960	62750	62270
7	46980	43370	41380	41370	42860	48010	55850	57540	59860	61960	62760	62250
8	46980	43270	41380	41370	42920	48070	56010	57560	60000	61940	62750	62230
9	46980	43170	41370	41350	42990	48140	56160	57520	60130	61910	62720	62210
10	46910	43040	41360	41360	43040	48190	56270	57540	60260	61880	62700	62190
11	46760	42920	41340	41380	43110	48240	56380	57600	60360	61850	62690	62150
12	46630	42810	41330	41440	43150	48310	56500	57680	60480	61880	62690	62130
13	46490	42670	41330	41510	43210	48390	56630	57740	60610	61930	62730	62120
14	46360	42530	41330	41580	43280	48470	56770	57730	60710	61990	62710	62100
15	46230	42400	41310	41610	43300	48550	56880	57750	60810	62060	62700	62080
16	46110	42280	41290	41670	43330	48680	57010	57750	60910	62110	62670	62070
17	45990	42170	41290	41720	43400	48770	57110	57750	61000	62170	62660	62050
18	45870	42070	41290	41800	43460	48850	57190	57780	61040	62240	62640	62020
19	45760	41990	41280	41840	43530	49050	57200	57810	61100	62310	62600	62020
20	45640	41930	41330	41900	43600	49550	57260	57870	61170	62370	62590	62020
21	45510	41830	41330	41930	43620	50170	57290	57910	61230	62440	62560	62010
22	45400	41740	41340	42010	43620	50450	57300	57970	61300	62500	62550	62010
23	45280	41670	41350	42050	43590	50700	57310	58020	61380	62570	62530	62000
24	45160	41570	41350	42100	43570	50860	57390	58210	61450	62630	62510	62000
25	45040	41470	41340	42150	43580	51060	57440	58370	61520	62670	62480	61980
26	44900	41440	41330	42200	43590	51560	57400	58570	61580	62680	62450	61960
27	44770	41440	41330	42250	43660	53010	57410	58720	61640	62760	62440	61950
28	44640	41430	41330	42290	44010	53580	57400	58840	61730	62830	62410	61930
29	44510	41430	41320	42360	---	54010	57360	58900	61800	62880	62390	61910
30	44380	41430	41310	42430	---	54400	57310	59060	61900	62880	62370	61900
31	44260	---	41310	42480	---	54660	---	59150	---	62890	62350	---
MAX	47060	44140	41420	42480	44010	54660	57440	59150	61900	62890	62880	62310
MIN	44260	41430	41280	41320	42540	47140	54840	57270	59300	61850	62350	61900
a	692.86	698.57	698.43	690.82	692.58	704.09	706.75	708.54	711.17	712.09	711.59	711.17
b	-2810	-2830	-120	+1170	+1530	+10650	+2650	+1840	+2750	+990	-540	-450

CAL YR 1990 MAX 57020 MIN 41280 b -5060
WTR YR 1991 MAX 62890 MIN 41280 b +14830

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11022100 SAN VICENTE RESERVOIR NEAR LAKESIDE, CA

LOCATION.--Lat 32°54'45", long 116°55'25", in SW 1/4 NW 1/4 sec.31, T.14 S., R.1 E., San Diego County, Hydrologic Unit 18070304, at outlet tower near center of upstream face of San Vicente Dam on San Vicente Creek and 3.6 mi north of Lakeside.

DRAINAGE AREA.--74.2 mi².

PERIOD OF RECORD.--October 1946 to September 1961 (published with San Vicente Creek at San Vicente Dam, at Foster, station 11022000), October 1972 to current year. Monthend contents only October 1972 to September 1987.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by county of San Diego). October 1972 to current year, supplementary water-stage recorder used for flood warning only, at same site at datum 560 ft higher. Prior to October 1987, nonrecording gage at same site.

REMARKS.--Reservoir is formed by concrete-gravity dam, constructed in 1941-43 by city of San Diego; storage began during construction period. Capacity of reservoir at spillway level, 90,230 acre-ft, elevation, 650 ft. Dead storage below lowest outlet, 350 acre-ft, elevation, 493.0 ft. Reservoir storage includes supplemental water from the San Diego River, Santa Ysabel Creek, and Colorado River basins. No diversion upstream from reservoir. Water is released as required for municipal use.

COOPERATION.--Daily elevations records, Feb. 21 to Mar. 8, provided by city of San Diego.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 94,200 acre-ft, spilling, Feb. 21, 1980, elevation, 653.54 ft; minimum observed, 12,390 acre-ft, Nov. 1, 1947, elevation, 549.22 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 85,650 acre-ft, Apr. 18, 20, elevation, 645.68 ft; minimum, 71,820 acre-ft, Sept. 30, elevation, 631.99 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by city of San Diego, dated Feb. 18, 1944)

610	51,870	640	79,800
620	60,610	650	90,230
630	69,920	654	94,600

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80230	76770	77190	77490	79830	82140	85020	84120	83050	84790	82830	76020
2	80120	76760	77210	77500	79960	82930	84950	84110	83070	84840	82610	75820
3	80050	76650	77200	77580	80100	83050	84820	84120	83120	84770	82380	75610
4	79930	76610	77230	77650	80240	83050	84770	84130	83140	84550	82150	75450
5	79800	76550	77240	77700	80320	83100	84800	84140	83170	84370	81930	75310
6	79700	76510	77210	77730	80310	83150	84820	84140	83190	84230	81700	75170
7	79610	76500	77150	77760	80320	83260	84830	84130	83220	84140	81490	75030
8	79470	76480	77100	77800	80330	83270	84870	84130	83240	83990	81260	74920
9	79300	76460	77040	77850	80350	83350	84930	84130	83260	83810	81040	74770
10	79150	76410	77030	77890	80380	83390	84990	84110	83280	83650	80830	74650
11	79000	76380	77010	77930	80410	83480	85060	84050	83350	83460	80620	74450
12	78880	76360	77030	78010	80440	83640	85150	83980	83420	83380	80390	74310
13	78740	76310	77040	78090	80480	83810	85250	83870	83480	83350	80180	74140
14	78620	76220	77050	78190	80510	83960	85360	83720	83530	83330	79980	74040
15	78500	76110	77040	78280	80550	84140	85490	83590	83590	83310	79780	73920
16	78380	76060	77060	78360	80580	84310	85580	83430	83670	83290	79550	73770
17	78250	76160	77070	78460	80640	84450	85640	83270	83740	83270	79340	73640
18	78140	76270	77020	78550	80670	84610	85640	83040	83820	83250	79110	73530
19	78020	76430	77050	78640	80700	84840	85640	82810	83910	83230	78890	73390
20	77920	76560	77090	78740	80730	85050	85630	82590	83990	83210	78660	73290
21	77850	76680	77110	78840	80740	85250	85620	82410	84080	83200	78440	e73170
22	77750	76770	77150	78950	80810	85180	85610	82370	84160	83180	78210	e73070
23	77620	76870	77160	79070	80910	85020	85610	82420	84240	83160	78000	e72950
24	77510	76950	77180	79240	80990	84850	85500	82490	84320	83150	77780	e72830
25	77380	77000	77210	79360	81060	84750	85310	82560	84400	83130	77560	e72760
26	77280	77050	77240	79440	81770	84820	85110	82620	84490	83120	77340	72560
27	77170	77070	77270	79510	81280	85540	84910	82690	84540	83090	77120	72360
28	77050	77090	77280	79590	81530	85550	84720	82760	84600	83070	76890	72170
29	76950	77140	77330	79660	---	85450	84500	82830	84660	83050	76670	71980
30	76840	77160	77370	79710	---	85300	84260	82940	84730	83030	76450	71820
31	76800	---	77440	79750	---	85150	---	83010	---	83030	76240	---
MAX	80230	77160	77440	79750	81770	85550	85640	84140	84730	84840	82830	76020
MIN	76800	76060	77010	77490	79830	82140	84260	82370	83050	83030	76240	71820
a	637.05	637.41	637.69	639.95	641.71	645.19	644.35	643.15	644.79	643.17	636.48	631.99
b	-3530	+360	+280	+2310	+1780	+3620	-890	-1250	+1720	-1700	-6790	-4420

CAL YR 1990 MAX 83000 MIN 75530 b -1940

WTR YR 1991 MAX 85640 MIN 71820 b -8510

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11022200 LOS COCHES CREEK NEAR LAKESIDE, CA

LOCATION.--Lat 32°50'10", long 116°53'58", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, on upstream right bank side of bridge on Old Highway 8, 2.7 mi upstream from mouth, and 1.9 mi southeast of Lakeside.

DRAINAGE AREA.--12.2 mi².

PERIOD OF RECORD.--October 1983 to current year.

REVISED RECORDS.--WDR CA-86-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--8 years, 1.31 ft³/s, 949 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 474 ft³/s, Mar. 27, 1991, gage height, 7.47 ft; minimum daily, 0.07 ft³/s, July 11, 12, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0630	351	6.80	Mar. 27	0515	*474	*7.47
Mar. 21	0400	137	5.13	July 31	0530	42	3.72

Minimum daily, 0.14 ft³/s, Aug. 30, 31, Sept. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	.20	.30	.42	.47	146	9.6	1.6	.84	.44	.73	.16
2	.26	.20	.30	.42	.44	13	6.7	1.4	.82	.42	.52	.16
3	.24	.19	.28	2.8	.44	5.0	6.1	1.5	.77	.41	.45	.14
4	.21	.17	.29	2.4	.45	3.7	5.6	1.4	.73	.40	.39	.18
5	.20	.18	.29	.75	.44	3.2	4.8	1.4	.70	.39	.36	2.7
6	.21	.19	.29	.65	.44	2.7	4.0	1.3	.66	.41	.35	2.0
7	.21	.29	.30	.65	.44	2.2	3.9	1.2	.63	.41	.31	.37
8	.21	.18	.29	.62	.43	2.0	3.7	1.2	.63	.38	.30	.32
9	.18	.18	.29	2.4	.47	1.8	3.2	1.2	.61	.36	.28	.32
10	.16	.17	.30	.71	.44	1.7	3.2	1.2	.60	.36	.26	.34
11	.16	.20	.31	.61	.47	2.4	3.0	1.1	.60	.37	.26	.37
12	.16	.20	.31	.58	.44	1.5	2.5	1.1	.58	.36	.24	.37
13	.16	.21	.32	.56	.43	5.0	2.4	1.0	.58	.35	.22	.37
14	.18	.20	.33	.55	.42	2.3	2.3	1.2	.57	.35	.25	.32
15	.17	.19	.34	.59	.41	8.2	2.5	1.1	.54	.34	.21	.30
16	.18	.20	.39	.52	.45	3.6	2.4	1.0	.53	.35	.22	.34
17	.19	.22	.34	.48	.45	1.5	2.2	.94	.52	.36	e.22	.30
18	.20	.22	.36	.49	.43	1.5	2.3	.92	.54	.37	e.22	.32
19	.28	.86	.80	.49	.41	21	2.1	.94	.52	.37	.22	.44
20	.22	1.3	5.0	.49	.53	56	2.1	1.0	.50	.40	.22	.41
21	.18	.37	.66	.49	.90	54	1.9	.95	.51	.37	.18	.37
22	.17	.31	.54	.49	.77	15	2.1	.95	.50	.37	.18	.34
23	.17	.29	.48	.49	.40	8.1	2.0	.88	.49	.35	.16	.30
24	.17	.30	.48	.49	.39	6.2	1.9	.89	.48	.33	.16	.34
25	.16	.29	.46	.50	.40	18	1.8	.89	.48	.34	.16	.30
26	.17	.54	.44	.49	.41	45	1.7	.87	.48	.32	.16	.24
27	.16	.32	.44	.49	11	101	1.7	1.2	.49	.29	.16	e.24
28	.16	.33	.44	.49	34	23	1.6	.85	.47	.27	.16	e.24
29	.16	.28	.44	.50	---	17	1.6	.87	.45	.28	.16	e.24
30	.16	.28	.44	.48	---	12	1.5	.90	.45	.31	.14	e.24
31	.18	---	.41	.49	---	8.7	---	.92	---	8.1	.14	---
TOTAL	5.91	9.06	16.66	22.58	57.17	592.3	92.4	33.87	17.27	18.93	7.99	13.08
MEAN	.19	.30	.54	.73	2.04	19.1	3.08	1.09	.58	.61	.26	.44
MAX	.29	1.3	5.0	2.8	34	146	9.6	1.6	.84	8.1	.73	2.7
MIN	.16	.17	.28	.42	.39	1.5	1.5	.85	.45	.27	.14	.14
AC-FT	12	18	33	45	113	1170	183	67	34	38	16	26

CAL YR 1990 TOTAL 220.98 MEAN .61 MAX 16 MIN .08 AC-FT 438
WTR YR 1991 TOTAL 887.22 MEAN 2.43 MAX 146 MIN .14 AC-FT 1760

e Estimated.

11022350 FORESTER CREEK AT EL CAJON, CA

LOCATION.--Lat 32°49'16", long 116°58'32", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, on right bank at downstream side of bridge on Billy Mitchell Drive, 0.8 mi upstream from unnamed tributary, and 3.6 mi upstream from mouth.

DRAINAGE AREA.--21.3 mi².

PERIOD OF RECORD.--October 1983 to current year.

REVISED RECORDS.--WDR CA-89-1: 1984-86, 1988(M).

GAGE.--Water-stage recorder. Elevation of gage is 370 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--8 years, 5.65 ft³/s, 4,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft³/s, Mar. 27, 1991, gage height, 10.66 ft, from rating curve extended above 900 ft³/s on basis of step-backwater computation; minimum daily, 0.19 ft³/s, Oct. 9, 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*), from rating curve extended above 900 ft³/s on basis of step-backwater computation:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0600	3,440	10.25	Mar. 27	0315	*3,900	*10.66
Mar. 20	0745	1,730	8.40	July 31	0615	1,340	7.85

Minimum daily, 0.19 ft³/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	.58	.60	.39	.62	584	2.9	1.2	e.90	e.90	.86	.61
2	.33	.43	.53	.65	.55	4.6	2.6	1.3	e.88	.97	.78	.50
3	.77	.46	.64	63	.58	2.1	2.4	1.3	e.88	1.0	.70	.53
4	.30	.37	.70	21	.61	1.6	2.3	1.2	e.88	1.1	.67	.63
5	.26	.42	.71	.89	.64	1.4	2.3	1.2	e.86	.82	.70	13
6	.34	.51	.66	.69	.67	1.2	2.3	1.2	e.86	.59	.74	1.3
7	.30	.42	.79	.49	.59	1.2	2.2	1.3	e.86	.75	.79	.64
8	.28	.29	.86	.62	.63	1.0	2.1	1.2	e.84	.68	.82	.58
9	.19	.37	.89	40	.61	1.0	2.0	1.3	e.84	.57	.85	.57
10	.38	.42	1.1	.93	.58	1.0	2.0	1.3	e.82	.59	.79	.52
11	.46	.41	1.7	.55	.65	5.7	2.2	1.1	e.82	.66	.69	.59
12	.59	.47	.48	.52	.63	1.0	1.9	1.0	e.80	.57	.74	.57
13	.73	.46	.40	.66	.63	30	1.9	1.1	e.80	.50	.76	.63
14	.55	.48	.44	.57	.63	4.4	1.9	1.2	e.78	.48	.70	.63
15	.55	.37	.55	.64	.74	33	2.0	1.1	e.78	.57	.69	.60
16	.45	.45	4.3	.65	.71	2.2	2.0	1.1	e.78	.57	.71	.59
17	.53	.41	.37	.54	.63	1.1	1.9	1.1	e.76	.59	.69	.54
18	.46	.52	.34	.53	.66	5.2	1.9	1.0	e.76	.60	.68	.56
19	.84	32	37	.50	.61	127	1.9	.85	e.74	.54	.71	.53
20	.47	38	57	.59	.58	253	1.9	.87	e.74	.59	.71	10
21	.36	.66	4.6	.57	.56	147	1.9	.84	e.74	.42	.72	.95
22	.49	.38	.85	.56	.58	5.3	7.9	.76	e.74	.38	.63	.71
23	.52	.37	.54	.50	.67	3.2	1.7	.60	e.72	.30	.62	.61
24	.46	.39	.41	.50	.52	2.6	1.6	.59	e.72	.29	.55	.63
25	.48	.36	.40	.55	.43	49	1.4	e.89	e.72	.35	.52	.60
26	.62	10	.44	.56	.54	162	1.2	e.94	e.72	.32	.60	.63
27	.66	.43	.45	.55	164	376	1.2	e.94	e.70	.29	.55	.58
28	.48	.45	.50	.62	289	8.8	1.2	e.92	e.70	.26	.57	.63
29	.46	.66	.52	.63	---	5.6	1.2	e.92	e.70	.28	.57	.66
30	.55	.63	.32	.51	---	4.1	1.3	e.90	e.80	.33	.70	.66
31	.50	---	.31	.46	---	3.4	---	e.90	---	78	.68	---
TOTAL	17.86	92.17	119.40	140.42	468.85	1828.7	63.2	32.12	23.64	94.86	21.49	40.78
MEAN	.58	3.07	3.85	4.53	16.7	59.0	2.11	1.04	.79	3.06	.69	1.36
MAX	3.5	38	57	63	289	584	7.9	1.3	.90	78	.86	13
MIN	.19	.29	.31	.39	.43	1.0	1.2	.59	.70	.26	.52	.50
AC-FT	35	183	237	279	930	3630	125	64	47	188	43	81

CAL YR 1990 TOTAL 1271.03 MEAN 3.48 MAX 134 MIN .19 AC-FT 2520
WTR YR 1991 TOTAL 2943.49 MEAN 8.06 MAX 584 MIN .19 AC-FT 5840

e Estimated.

11022480 SAN DIEGO RIVER AT MAST ROAD, NEAR SANTEE, CA

LOCATION.--Lat 32°49'29", long 117°03'17", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, near left bank at Mast Road bridge, 0.7 mi upstream from Old Mission Dam site, 2.8 mi west of Santee, and 14.2 mi downstream from El Capitan Lake.

DRAINAGE AREA.--368 mi².

PERIOD OF RECORD.--May 1912 to December 1915, April 1916 to current year. Monthly discharge only for some periods and yearly estimates only for 1924-25, published in WSP-1315-B. Prior to September 1981 published as "near Santee".

REVISED RECORDS.--WSP 1565: 1955-56. WSP 1635: 1922, 1926(M), 1927. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 300 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 10, 1920, nonrecording gage at site 0.7 mi downstream at different datum. Nov. 10, 1920, to Jan. 19, 1982, at site 2.6 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair below 10 ft³/s, poor above. Flow regulated by Cuyamaca Reservoir, capacity, 11,540 acre-ft, El Capitan Lake (station 11020600), and San Vicente Reservoir (station 11022100). Diversions by city of San Diego for municipal supply and by Helix Irrigation District. AVERAGE DISCHARGE represents flow to ocean during period of record, regardless of upstream development.

AVERAGE DISCHARGE.--78 years (water years 1913-15, 1917-91), 24.8 ft³/s, 17,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,400 ft³/s, Feb. 16, 1927, gage height, 18.1 ft, from floodmarks, on basis of slope-area measurement of peak flow; no flow for many days some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 70,200 ft³/s, Jan. 27, 1916, gage height, 25.1 ft, from floodmarks, based on slope-conveyance computation of peak flow, site and datum then in use; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,640 ft³/s, Mar. 1, gage height, 11.75 ft, from rating curve extended above 1,420 ft³/s; minimum daily, 0.45 ft³/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	.74	3.7	4.1	3.0	1610	53	9.8	4.8	2.3	10	1.7
2	1.8	.78	3.9	4.0	2.6	256	44	9.4	4.2	2.3	7.4	1.6
3	1.1	.82	4.1	46	2.9	98	37	9.0	4.2	2.2	5.9	1.5
4	1.2	.89	3.9	57	3.1	66	32	8.8	4.1	2.2	5.1	1.5
5	.76	.97	3.6	10	3.0	49	28	8.5	4.0	2.2	4.7	2.9
6	.64	1.1	3.2	7.2	2.9	39	26	8.2	4.0	2.1	4.0	10
7	.64	1.2	3.0	7.0	3.1	30	23	7.9	3.9	2.1	3.6	3.1
8	.58	1.1	2.8	6.5	2.8	25	22	7.7	3.8	2.0	3.4	2.3
9	.49	1.1	2.6	42	2.4	21	21	7.7	3.9	1.9	3.0	1.9
10	.45	1.1	2.4	11	2.4	18	20	7.6	3.8	1.9	2.8	2.3
11	.47	1.1	3.3	7.8	2.4	23	18	7.4	3.8	1.9	2.8	2.1
12	.53	1.1	2.9	6.9	2.1	15	17	7.1	3.7	1.9	2.4	1.9
13	.63	1.1	2.8	6.3	2.3	47	16	6.9	3.7	1.8	2.3	2.1
14	.72	1.2	2.6	5.8	2.5	26	15	6.7	3.6	1.8	2.2	2.0
15	.69	1.2	2.7	5.3	2.1	47	15	6.7	3.5	1.8	2.1	1.8
16	.71	1.2	5.5	5.2	2.2	28	14	6.5	3.5	1.8	2.0	1.7
17	.67	1.3	3.3	5.3	2.4	17	14	6.3	3.3	1.8	1.8	1.6
18	.70	1.3	2.9	5.0	2.4	16	14	6.1	3.3	1.7	1.7	1.6
19	.84	1.8	14	4.8	2.2	230	13	4.5	3.1	1.7	1.6	1.5
20	.95	67	101	4.6	1.9	503	13	4.2	2.8	1.7	1.6	5.9
21	.72	5.9	13	4.4	1.9	706	12	4.3	2.8	1.8	1.6	5.1
22	.60	4.0	10	4.3	1.8	189	19	4.6	2.7	1.7	1.8	2.0
23	.61	3.8	7.5	4.1	2.2	104	12	4.8	2.6	1.7	1.9	1.7
24	.58	3.7	6.7	3.9	2.5	67	12	4.7	2.5	1.7	1.9	1.6
25	.57	3.7	6.3	3.8	2.6	120	12	4.7	2.6	1.7	1.8	1.5
26	.58	12	5.8	3.7	2.7	392	11	5.0	2.6	1.7	1.7	1.5
27	.66	5.5	5.2	3.5	194	1160	11	5.0	2.6	1.6	1.7	1.4
28	.67	3.5	4.8	3.4	419	275	11	4.6	2.6	1.6	1.7	1.4
29	.61	3.3	4.6	3.4	---	142	11	4.8	2.5	1.6	1.7	1.4
30	.63	3.6	4.4	3.3	---	98	10	4.5	2.4	1.6	1.7	1.4
31	.69	---	4.2	3.2	---	70	---	4.9	---	99	1.8	---
TOTAL	24.59	137.10	246.7	292.8	677.4	6487	576	198.9	100.9	154.8	89.7	70.0
MEAN	.79	4.57	7.96	9.45	24.2	209	19.2	6.42	3.36	4.99	2.89	2.33
MAX	3.1	67	101	57	419	1610	53	9.8	4.8	99	10	10
MIN	.45	.74	2.4	3.2	1.8	15	10	4.2	2.4	1.6	1.6	1.4
AC-FT	49	272	489	581	1340	12870	1140	395	200	307	178	139

CAL YR 1990 TOTAL 2574.83 MEAN 7.05 MAX 196 MIN .40 AC-FT 5110
WTR YR 1991 TOTAL 9055.89 MEAN 24.8 MAX 1610 MIN .45 AC-FT 17960

11023000 SAN DIEGO RIVER AT FASHION VALLEY, AT SAN DIEGO, CA

LOCATION.--Lat 32°45'54", long 117°10'04", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, on left bank 2.6 mi upstream from mouth, 500 ft upstream from Fashion Valley road crossing, 0.4 mi downstream from unnamed tributary, and 26.4 mi downstream from El Capitan Lake.

DRAINAGE AREA.--429 mi².

PERIOD OF RECORD.--October 1912 to January 1916 published as San Diego River at San Diego (monthly discharge only, published in WSP 1315-B), January 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1315-B for history of changes for period October 1912 to January 1916.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Cuyamaca Reservoir, capacity, 11,540 acre-ft; El Capitan Lake (station 11020600), and San Vicente Reservoir (station 11022100). Diversions by city of San Diego for municipal supply and by Helix Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,000 ft³/s, Jan. 27, 1916, gage height, 19.3 ft, estimated on basis of upstream station, San Diego River near Santee; no flow at times during most years. Maximum discharge recorded since storage began in El Capitan Lake and San Vicente Reservoir, 8,280 ft³/s, Mar. 2, 1983, gage height, 13.11 ft, from rating curve extended above 5,800 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,930 ft³/s, Mar. 1, gage height, 12.45 ft; minimum daily, 0.18 ft³/s, Sept. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.69	2.7	6.4	4.8	3480	98	12	4.3	1.9	76	1.4
2	1.0	.60	2.8	6.4	5.0	677	79	11	4.3	1.6	34	1.2
3	1.2	.59	2.8	24	5.0	219	65	11	4.1	1.5	16	.53
4	.99	.62	2.9	230	4.9	115	55	11	3.9	1.7	11	.18
5	.78	.84	2.5	124	5.1	80	46	11	3.7	1.9	8.1	1.0
6	.83	.83	2.2	48	5.4	63	43	12	3.5	2.0	6.7	.84
7	.86	.69	2.0	26	5.0	51	40	11	3.6	1.9	5.8	1.2
8	.86	.81	2.0	17	4.5	43	35	11	4.2	2.0	5.0	1.5
9	.67	.65	2.0	30	4.4	34	32	9.1	4.5	1.6	4.2	1.5
10	.48	.64	2.3	67	4.5	29	30	8.4	3.9	1.3	3.7	1.1
11	.34	.59	2.1	49	4.4	28	30	8.7	3.2	1.2	3.7	.86
12	.29	.63	1.9	27	4.2	26	26	8.6	3.0	1.0	3.2	.85
13	.31	.72	1.7	17	4.3	30	26	7.8	2.8	1.0	3.2	.78
14	.46	.77	1.8	14	4.4	72	25	7.4	2.8	1.1	3.2	1.0
15	.45	.74	2.2	12	4.2	58	23	7.7	3.2	1.2	2.7	1.2
16	.43	.75	2.6	10	4.0	85	21	7.3	3.4	1.0	2.6	.94
17	.47	.84	3.1	9.5	4.1	47	19	6.7	3.1	.88	2.8	.33
18	.51	1.1	2.9	8.9	4.1	28	18	6.0	2.8	.80	2.8	.38
19	.46	3.7	4.9	7.5	3.9	490	19	6.3	2.6	.66	2.5	.48
20	.55	104	147	7.3	4.3	792	19	6.3	2.4	.61	2.1	2.1
21	.69	45	141	7.2	3.9	1760	18	6.0	2.5	1.2	2.0	9.5
22	.73	8.7	58	7.0	3.7	473	29	5.2	2.4	1.3	1.9	4.7
23	.69	5.2	30	6.4	3.8	213	29	4.8	2.5	1.3	1.9	2.6
24	.65	4.0	19	5.9	4.1	136	20	4.6	2.5	1.5	1.8	1.7
25	.74	3.3	13	5.8	3.9	241	16	4.5	2.3	1.3	1.8	1.4
26	.56	6.0	11	6.4	3.6	828	15	5.0	2.2	1.2	1.9	1.2
27	.51	7.8	9.3	6.8	130	2350	13	4.7	2.0	1.3	1.8	1.1
28	.55	4.0	8.4	6.3	793	711	13	4.2	1.8	1.6	1.4	2.0
29	.63	2.8	7.8	5.6	---	294	11	3.7	1.7	1.6	1.4	2.5
30	.73	2.4	7.4	5.1	---	184	11	3.7	1.9	1.3	1.4	1.9
31	.77	---	6.9	4.8	---	133	---	4.3	---	149	1.4	---
TOTAL	20.19	210.00	506.2	808.3	1036.5	13770	924	231.0	91.1	189.45	218.0	47.97
MEAN	.65	7.00	16.3	26.1	37.0	444	30.8	7.45	3.04	6.11	7.03	1.60
MAX	1.2	104	147	230	793	3480	98	12	4.5	149	76	9.5
MIN	.29	.59	1.7	4.8	3.6	26	11	3.7	1.7	.61	1.4	.18
AC-FT	40	417	1000	1600	2060	27310	1830	458	181	376	432	95

CAL YR 1990 TOTAL 5054.58 MEAN 13.8 MAX 406 MIN .24 AC-FT 10030
WTR YR 1991 TOTAL 18052.71 MEAN 49.5 MAX 3480 MIN .18 AC-FT 35810

11023330 LOS PENASQUITOS CREEK BELOW POWAY CREEK, NEAR POWAY, CA

LOCATION.--Lat 32°56'58", long 117°04'08", in NE 1/4 NE 1/4 sec.22, T.14 S., R.2 W., San Diego County, Hydrologic Unit 18070304, on right bank 10 ft upstream from concrete ford on Cobblestone Creek Road, 0.2 mi downstream from confluence of Poway and Pomerado Creeks, and 2.0 mi southwest of Poway.

DRAINAGE AREA.--31.2 mi².

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 415 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow partly regulated by small conservation reservoirs.

AVERAGE DISCHARGE.--21 years, 5.93 ft³/s, 4,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,990 ft³/s, Feb. 21, 1980, gage height, 11.11 ft, from rating curve extended above 300 ft³/s on basis of slope-area measurements at gage heights 9.58 and 11.11 ft; no flow at times during some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 20	1045	205	5.21	Mar. 20	0745	1,280	7.52
Jan. 4	0930	408	5.89	Mar. 27	0300	*2,520	*8.84
Jan. 9	1515	283	5.51	July 31	0430	295	5.57
Mar. 1	0630	2,190	8.54				

Minimum daily, 0.21 ft³/s, Feb. 25, 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.50	.66	.66	.42	567	7.4	1.2	.43	.43	.95	.53
2	.45	.49	.67	.69	.44	11	3.6	1.3	.34	.51	.83	.54
3	.42	.48	.68	29	.45	4.0	3.3	1.1	.34	.41	.69	.52
4	.40	.47	.65	45	.45	2.9	3.7	.91	.34	.46	.66	.51
5	.39	.50	.66	1.1	.38	2.5	4.2	.86	.34	.40	.64	12
6	.36	.56	.67	.82	.35	1.9	3.9	.80	.34	.45	.69	2.0
7	.39	.52	.67	.81	.39	2.0	3.6	.88	.34	.51	.65	.66
8	.39	.52	.67	.79	.38	1.8	3.5	.92	.36	.43	.65	.60
9	.34	.50	.63	22	.37	1.4	3.7	.93	.46	.43	.64	.63
10	.28	.46	.62	1.7	.33	1.2	3.2	.72	.46	.40	.62	.62
11	.29	.45	.68	1.1	.32	8.6	3.1	.61	.49	.40	.59	.63
12	.35	.46	.65	.96	.33	1.6	2.8	.63	.48	.39	.62	.65
13	.46	.45	.63	.91	.32	9.8	2.2	.67	.46	.37	.62	.65
14	.48	.45	.62	.85	.31	8.4	2.3	.74	.46	.40	.62	.64
15	.48	.50	.65	.84	.29	6.1	2.2	.73	.45	.47	.62	.64
16	.46	.47	1.3	.82	.24	3.7	1.8	.80	.34	.50	.64	.66
17	.38	.50	.67	.82	.23	1.4	1.9	.76	.34	.48	.64	.64
18	.37	.51	.64	.82	.25	2.1	1.9	.67	.34	.51	.66	.64
19	.50	12	6.6	.69	.26	118	1.7	.56	.35	.53	.65	.65
20	.42	20	16	.72	.23	262	1.7	.44	.39	.49	.67	.66
21	.35	.91	1.1	.77	.23	141	1.8	.36	.49	.44	.65	.58
22	.29	.72	.90	.75	.23	19	2.3	.34	.46	.46	.66	.54
23	.32	.69	.69	.66	.23	11	1.7	.34	.46	.57	.65	.53
24	.28	.69	.69	.68	.23	8.6	1.4	.34	.46	.45	.57	.53
25	.30	.69	.66	.68	.21	46	1.3	.34	.46	.34	.63	.57
26	.32	4.9	.69	.72	.21	167	1.3	.38	.51	.29	.68	.56
27	.38	.70	.68	.64	157	573	1.2	.39	.54	.32	.60	.59
28	.38	.65	.68	.59	206	37	1.3	.50	.52	.27	.60	.57
29	.40	.63	.63	.60	---	16	1.4	.54	.54	.28	.57	.52
30	.44	.64	.64	.53	---	6.2	1.2	.55	.50	.33	.51	.49
31	.47	---	.63	.52	---	3.9	---	.54	---	52	.52	---
TOTAL	11.94	52.01	43.01	118.24	371.08	2046.1	76.6	20.85	12.79	64.72	19.99	30.55
MEAN	.39	1.73	1.39	3.81	13.3	66.0	2.55	.67	.43	2.09	.64	1.02
MAX	.50	20	16	45	206	573	7.4	1.3	.54	.52	.95	12
MIN	.28	.45	.62	.52	.21	1.2	1.2	.34	.34	.27	.51	.49
AC-FT	24	103	85	235	736	4060	152	41	25	128	40	61

CAL YR 1990 TOTAL 712.99 MEAN 1.95 MAX 89 MIN .23 AC-FT 1410
WTR YR 1991 TOTAL 2867.88 MEAN 7.86 MAX 573 MIN .21 AC-FT 5690

11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA

LOCATION.--Lat 32°56'35", long 117°07'15", in Los Penasquitos Grant, San Diego County, Hydrologic Unit 18070304, on left bank 1.0 mi downstream from Cypress Creek and 5.5 mi southwest of Poway.

DRAINAGE AREA.--42.1 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow partly regulated by several conservation reservoirs upstream from station. Pumping from wells along stream for irrigation. Flow augmented by reclaimed water from Poway area.

AVERAGE DISCHARGE.--27 years, 7.98 ft³/s, 5,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft³/s, Feb. 21, 1980, gage height, 10.26 ft, from rating curve extended above 1,400 ft³/s; no flow at times in 1968, 1972, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0800	2,370	7.82	Mar. 27	0415	*3,110	*8.66
Mar. 20	0930	1,190	6.27				

Minimum daily, 0.52 ft³/s, Aug. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	1.4	1.5	1.7	1.6	777	21	4.3	2.4	1.1	6.0	.62
2	1.4	1.4	1.5	1.7	1.6	30	15	4.3	1.9	1.1	1.8	.61
3	1.3	1.3	1.5	10	1.6	10	12	4.5	2.5	1.2	1.4	.64
4	1.2	1.2	1.5	68	1.5	7.3	8.4	4.6	2.4	1.1	1.0	.68
5	1.1	1.2	1.5	8.1	1.5	6.5	7.7	4.5	1.3	1.1	.88	4.4
6	1.1	1.3	1.5	3.4	1.5	5.1	6.9	4.1	1.2	1.1	.76	17
7	1.1	1.3	1.5	2.6	1.5	4.4	6.4	4.1	1.0	1.1	.76	2.2
8	1.1	1.3	1.5	2.4	1.6	4.1	6.4	3.1	1.1	1.1	.70	1.5
9	1.0	1.6	1.4	23	1.8	3.8	6.4	2.9	1.1	1.1	.70	1.3
10	.91	1.2	1.4	11	1.8	3.3	6.0	2.5	1.1	1.1	.70	1.1
11	.90	1.2	1.5	3.3	1.8	13	5.2	2.4	1.6	1.0	.71	1.0
12	.96	1.2	1.6	2.6	1.8	4.6	5.1	2.4	1.6	1.0	.59	1.0
13	1.2	1.2	1.5	2.3	1.8	13	5.0	2.4	1.6	1.0	.52	1.1
14	1.3	1.3	1.5	2.1	1.8	20	4.6	2.3	1.5	.99	.61	1.3
15	1.3	1.3	1.6	2.2	1.8	7.4	4.6	2.5	.92	.87	.77	1.3
16	1.4	1.4	5.2	2.1	1.8	9.2	4.6	2.6	.75	.89	.76	1.1
17	1.4	1.9	2.3	2.0	2.0	3.6	4.7	2.4	.75	1.0	.81	1.1
18	1.3	1.4	1.8	2.1	2.2	3.7	4.9	2.4	.71	1.0	.83	1.1
19	1.5	3.4	4.2	2.1	2.6	170	4.5	2.4	.77	1.0	.77	1.0
20	1.6	40	23	1.9	2.6	346	4.3	2.5	.77	1.1	.65	1.1
21	1.4	6.6	4.4	1.8	2.5	217	4.1	2.5	.98	1.2	.61	1.1
22	1.2	2.4	4.9	1.9	2.6	32	8.2	2.4	1.3	1.2	.55	1.0
23	1.1	1.8	2.2	1.9	2.2	15	4.6	2.4	.93	1.2	.58	1.0
24	1.1	1.6	1.9	1.8	2.1	11	4.3	2.4	.78	1.3	.58	.82
25	1.1	1.5	1.7	1.8	1.9	68	4.5	2.2	.93	1.2	.58	.76
26	1.1	8.9	1.6	1.7	1.8	240	4.5	2.2	1.1	1.1	.68	1.1
27	1.1	2.8	1.8	1.9	111	788	4.2	2.3	1.1	1.0	.92	1.4
28	1.2	1.8	2.4	1.8	241	75	4.1	1.7	1.1	.97	.66	1.4
29	1.3	1.7	2.0	1.7	---	39	4.1	1.8	1.1	.94	.55	1.5
30	1.3	1.5	1.7	1.7	---	26	4.1	2.1	1.2	1.0	.78	1.5
31	1.4	---	1.6	1.6	---	16	---	2.9	---	55	.64	---
TOTAL	38.97	98.1	85.2	174.2	401.3	2969.0	190.4	88.1	37.49	87.06	28.85	52.73
MEAN	1.26	3.27	2.75	5.62	14.3	95.8	6.35	2.84	1.25	2.81	.93	1.76
MAX	2.6	40	23	68	241	788	21	4.6	2.5	55	6.0	17
MIN	.90	1.2	1.4	1.6	1.5	3.3	4.1	1.7	.71	.87	.52	.61
AC-FT	77	195	169	346	796	5890	378	175	74	173	57	105

CAL YR 1990 TOTAL 1332.92 MEAN 3.65 MAX 115 MIN .64 AC-FT 2640
WTR YR 1991 TOTAL 4251.40 MEAN 11.6 MAX 788 MIN .52 AC-FT 8430

11025500 SANTA YSABEL CREEK NEAR RAMONA, CA

LOCATION.--Lat 33°06'25", long 116°51'55", in NW 1/4 NE 1/4 sec.27, T.12 S., R.1 E., San Diego County, Hydrologic Unit 18070304, on left bank 1.6 mi downstream from Temescal Creek, 4.5 mi north of Ramona, and 5.0 mi downstream from Lake Sutherland.

DRAINAGE AREA.--112 mi².

PERIOD OF RECORD.--February 1912 to February 1923 (monthly discharge only for February 1912, published in WSP 1315-B), October 1943 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 847.88 ft above National Geodetic Vertical Datum of 1929 (levels by city of San Diego Water Department). See WSP 1315-B for history of changes prior to Feb. 3, 1923.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Lake Sutherland, capacity, 29,680 acre-ft, since July 1954. Some small diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,400 ft³/s, Jan. 27, 1916, gage height, 14.0 ft, datum then in use, from rating curve extended above 1,500 ft³/s on basis of slope-conveyance study of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,240 ft³/s, Mar. 1, gage height, 5.99 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.02	.01	.01	420	10	1.8	.35	.05	.02	.00
2	.01	.01	.02	.02	.01	56	10	1.8	.28	.04	.01	.00
3	.00	.00	.01	.02	.01	11	9.8	1.8	.25	.04	.01	.00
4	.00	.01	.01	.02	.01	6.0	9.3	1.7	.19	.04	.00	.00
5	.00	.01	.01	.02	.01	3.6	8.0	1.5	.16	.04	.00	.00
6	.00	.01	.02	.02	.02	2.6	7.1	1.3	.15	.04	.01	.00
7	.00	.01	.02	.02	.02	2.0	6.7	1.2	.13	.05	.00	.00
8	.00	.01	.02	.03	.01	1.6	6.1	1.1	.12	.05	.00	.00
9	.00	.01	.02	.03	.02	1.4	5.2	1.1	.11	.04	.00	.00
10	.00	.01	.02	.02	.01	1.2	4.7	1.1	.10	.03	.01	.00
11	.01	.01	.02	.03	.00	1.3	4.5	1.1	.11	.03	.01	.00
12	.02	.01	.02	.03	.00	1.1	4.1	1.0	.10	.03	.01	.01
13	.01	.02	.02	.03	.00	1.1	3.8	1.0	.09	.03	.01	.01
14	.00	.02	.02	.03	.00	1.3	3.6	1.0	.09	.03	.01	.01
15	.00	.01	.02	.03	.00	1.4	3.5	1.0	.09	.05	.01	.01
16	.00	.00	.02	.01	.00	1.4	3.4	.92	.08	.03	.01	.00
17	.00	.01	.02	.00	.00	1.4	3.3	.86	.08	.02	.01	.00
18	.00	.01	.02	.01	.00	1.4	3.2	.95	.07	.03	.02	.00
19	.01	.01	.02	.01	.00	39	3.1	1.0	.06	.02	.01	.00
20	.00	.01	.02	.01	.00	142	2.8	.82	.06	.03	.01	.00
21	.00	.01	.02	.01	.00	143	2.7	.84	.06	.02	.00	.01
22	.00	.01	.01	.01	.00	81	2.7	.89	.06	.02	.00	.01
23	.01	.01	.01	.01	.00	49	2.8	.88	.06	.01	.00	.01
24	.01	.01	.02	.01	.00	31	2.9	.84	.07	.01	.01	.01
25	.01	.01	.01	.01	.00	35	2.9	.75	.07	.01	.00	.01
26	.01	.01	.01	.01	.00	50	2.8	.61	.05	.01	.00	.02
27	.01	.01	.01	.01	.05	330	2.6	.43	.05	.01	.00	.02
28	.01	.01	.01	.02	1.8	95	2.3	.40	.05	.00	.00	.02
29	.02	.01	.01	.01	---	41	2.1	.36	.04	.00	.00	.02
30	.02	.02	.01	.01	---	18	1.9	.39	.05	.00	.00	.02
31	.00	---	.01	.01	---	11	---	.43	---	.06	.00	---
TOTAL	0.16	0.31	0.50	0.52	1.98	1580.8	137.9	30.87	3.23	0.87	0.18	0.19
MEAN	.005	.010	.016	.017	.071	51.0	4.60	1.00	.11	.028	.006	.006
MAX	.02	.02	.02	.03	1.8	420	10	1.8	.35	.06	.02	.02
MIN	.00	.00	.01	.00	.00	1.1	1.9	.36	.04	.00	.00	.00
AC-FT	.3	.6	1.0	1.0	3.9	3140	274	61	6.4	1.7	.4	.4

CAL YR 1990 TOTAL 21.95 MEAN .060 MAX .38 MIN .00 AC-FT 44
WTR YR 1991 TOTAL 1757.51 MEAN 4.82 MAX 420 MIN .00 AC-FT 3490

SAN DIEGUITO RIVER BASIN

11028500 SANTA MARIA CREEK NEAR RAMONA, CA

LOCATION.--Lat 33°03'08", long 116°56'41", in SE 1/4 SE 1/4 sec.11, T.13 S., R.1 W., San Diego County, Hydrologic Unit 18070304, on left bank 3.8 mi northwest of Ramona, 3.1 mi northwest of Jensen's, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--57.6 mi².

PERIOD OF RECORD.--December 1912 to September 1920, October 1946 to current year.

REVISED RECORDS.--WSP 1285: 1952. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Concrete control since October 1946. Datum of gage is 1,294.44 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1946, at same site, at datum 1.78 ft lower.

REMARKS.--No estimated daily discharges. Records good. No regulation upstream from station. Land application of treated sewage effluent upstream from the gage beginning December 1972 contributes to low flows. The daily rate of application averaged 1.6 acre-ft during the 1991 water year.

AVERAGE DISCHARGE.--52 years (water years 1914-20, 1947-91), 5.78 ft³/s, 4,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s, Feb. 21, 1980, gage height, 14.39 ft, from rating curve extended above 130 ft³/s on basis of slope-area measurement at gage height 4.56 ft and slope-conveyance study at gage height 14.39 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0930	1,260	4.70	Mar. 27	0600	*1,450	*4.99
Mar. 20	2315	562	3.40				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.07	504	8.8	.67	.20	.16	.01	.02
2	.00	.00	.00	.08	.10	26	7.8	.57	.33	.18	.00	.03
3	.00	.00	.00	.34	.10	2.4	6.9	.63	.11	.07	.00	.03
4	.00	.00	.00	.23	.09	.87	5.3	.50	.36	.05	.00	.04
5	.00	.00	.00	.04	.20	.51	4.8	.45	.16	.18	.00	.00
6	.00	.00	.00	.01	.09	.31	4.6	.27	.29	.06	.00	.01
7	.00	.00	.00	.01	.23	.22	4.0	.39	.22	.04	.00	.01
8	.00	.00	.00	.01	.24	.18	3.5	.39	.10	.02	.01	.00
9	.00	.00	.00	.19	.06	.20	3.0	.41	.06	.01	.01	.02
10	.00	.00	.00	.09	.04	.24	3.0	.63	.05	.00	.00	.00
11	.00	.00	.00	.02	.06	.54	2.6	.29	.06	.00	.00	.00
12	.00	.00	.00	.01	.08	.22	1.9	.24	.09	.02	.00	.00
13	.00	.00	.00	.02	.18	.41	1.2	.20	.17	.15	.00	.00
14	.00	.00	.00	.02	.06	.75	1.3	.18	.14	.24	.09	.00
15	.00	.00	.00	.05	.06	.37	1.2	.24	.11	.08	.00	.00
16	.00	.00	.00	.19	.08	.33	1.1	.24	.07	.01	.00	.00
17	.00	.00	.00	.10	.17	.20	.97	.41	.04	.00	.00	.00
18	.00	.00	.00	.17	.13	.19	1.0	.40	.05	.00	.00	.00
19	.00	.00	.02	.23	.25	57	.99	.21	.24	.00	.00	.00
20	.00	.00	.36	.24	.23	274	.89	.20	.31	.00	.00	.00
21	.00	.00	.09	.08	.16	265	.95	.17	.04	.00	.00	.00
22	.00	.00	.07	.16	.10	19	1.4	.35	.06	.00	.00	.00
23	.00	.00	.05	.06	.04	8.3	1.1	.24	.04	.00	.00	.00
24	.00	.00	.00	.13	.03	5.5	1.0	.19	.03	.00	.00	.03
25	.00	.00	.04	.26	.03	23	.98	.11	.02	.00	.00	.10
26	.00	.00	.18	.07	.03	164	1.1	.10	.03	.00	.00	.00
27	.00	.00	.09	.06	1.2	609	.61	.10	.07	.00	.00	.00
28	.00	.00	.12	.07	8.7	60	.59	.10	.14	.00	.00	.00
29	.00	.00	.02	.19	---	19	.59	.10	.17	.00	.00	.00
30	.00	.00	.00	.12	---	13	.61	.11	.27	.00	.00	.00
31	.00	---	.00	.12	---	10	---	.21	---	.01	.00	---
TOTAL	0.00	0.00	1.04	3.37	12.81	2064.74	73.78	9.30	4.03	1.28	0.12	0.29
MEAN	.000	.000	.034	.11	.46	66.6	2.46	.30	.13	.041	.004	.010
MAX	.00	.00	.36	.34	8.7	609	8.8	.67	.36	.24	.09	.10
MIN	.00	.00	.00	.00	.03	.18	.59	.10	.02	.00	.00	.00
AC-FT	.00	.00	2.1	6.7	25	4100	146	18	8.0	2.5	.2	.6

CAL YR 1990 TOTAL 50.85 MEAN .14 MAX 1.9 MIN .00 AC-FT 101
WTR YR 1991 TOTAL 2170.76 MEAN 5.95 MAX 609 MIN .00 AC-FT 4310

11030020 LAKE HODGES NEAR ESCONDIDO, CA

LOCATION.--Lat 33°02'46", long 117°07'39", in SE 1/4 NW 1/4 sec.18, T.13 S., R.2 W., San Diego County, Hydrologic Unit 18070304, 300 ft upstream from right upstream end of Hodges Dam on San Dieguito River, 6.4 mi southwest of Escondido, and 2 mi southwest of Sutherland Reservoir.

DRAINAGE AREA.--303 mi².

PERIOD OF RECORD.--October 1945 to September 1968 (published with San Dieguito River at Lake Hodges, station 11030000), October 1972 to current year. Monthend contents only October 1972 to September 1987. Monthend gage heights, February 1919 to September 1945, in files of San Diego County Department of Sanitation and Flood Control.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by county of San Diego). Prior to Oct. 1, 1972, nonrecording gage at site 800 ft upstream on right bank at same datum. October 1972 to current year, supplementary water-stage recorder used for flood warning only, on left upstream face of dam at datum 200 ft higher.

REMARKS.--Reservoir is formed by multiple-arch reinforced concrete dam, constructed in 1917-19. Storage began in February 1919. Capacity of reservoir at spillway level, 33,550 acre-ft, elevation, 315.0 ft. Dead storage below lowest outlet, 1,160 acre-ft, elevation 254.0 ft, included in these records. Reservoir can be drawn down below lowest outlet by pumping. Water drawn from Lake Hodges passes through a conduit to San Dieguito re-regulating reservoir, from which it is released as required for municipal use. Diversions for irrigation upstream from Lake Hodges.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 41,620 acre-ft, spilling, Feb. 21, 1980, elevation, 321.50 ft; minimum observed, 114 acre-ft, Oct. 31, 1965, elevation, 235.80 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,370 acre-ft, May 8, elevation, 307.68 ft; minimum, 12,130 acre-ft, Dec. 19, elevation 290.33 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by city of San Diego, dated July 1, 1953)

280	7,340	300	18,530
285	9,440	305	22,780
290	11,950	310	27,780
295	14,950	315	33,550

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12640	12280	12240	12210	12630	14910	24340	25290	24780	e23930	e22960	22350
2	12620	12270	12240	12210	12640	15720	24410	25300	24750	e23900	22950	22330
3	12610	12250	12240	12260	12640	15850	24510	25310	24720	e23870	22940	22320
4	12600	12240	12230	12360	12650	15910	24580	25330	24690	e23840	22930	22280
5	12590	12230	12230	12380	12650	15960	24640	25330	24660	e23810	22920	22250
6	12570	12230	12220	12400	12660	15990	24680	25350	24640	e23780	22900	22240
7	12570	12220	12220	12400	12660	16030	24730	25360	24610	e23750	22890	22220
8	12560	12210	12210	12410	12680	16050	24790	25360	24590	e23720	22870	22180
9	12550	12210	12210	12480	12680	16070	24820	25350	24570	e23690	22850	22170
10	12540	12210	12210	12500	12680	16080	24860	25350	24540	e23660	22830	22140
11	12530	12200	12210	12510	12690	16130	24880	25350	24520	e23630	22820	22100
12	12520	12190	12190	12520	12700	16150	24910	25340	24500	e23590	22810	22050
13	12510	12190	12180	12530	12700	16200	24940	25360	24480	e23550	22780	22030
14	12500	12190	12180	12530	12700	16260	24960	25350	24450	e23500	22750	21990
15	12500	12190	12170	12540	12700	16310	24990	25330	24420	e23450	22730	21960
16	12500	12180	12170	12540	12700	16350	25000	25320	24400	e23410	22710	21930
17	12490	12180	12160	12540	12700	16380	25030	25290	24380	e23380	22680	21920
18	12480	12170	12150	12540	12710	16400	25050	25250	24340	e23350	22650	21880
19	12470	12180	12160	12560	12720	16880	25080	25220	24320	e23320	22620	21860
20	12450	12260	12180	12560	12710	17660	25100	25190	24280	e23290	22590	21850
21	12440	12270	12190	12570	12710	18500	25120	25150	24250	e23260	22560	21830
22	12420	12260	12190	12570	12710	18780	25140	25130	24220	e23230	22540	21800
23	12410	12250	12190	12580	12710	18900	25150	25100	24180	e23200	22510	21800
24	12390	12240	12180	12580	12720	18980	25190	25080	24160	e23170	22490	21790
25	12370	12240	12180	12580	12720	19210	25220	25040	24120	e23140	22470	21730
26	12360	12270	12190	12590	12720	19810	25240	25000	24080	e23110	22460	21680
27	12350	12270	12190	12600	12960	22760	25260	24960	e24050	e23080	22440	21710
28	12330	12270	12190	12610	13520	23640	25280	24920	e24020	e23050	22410	21690
29	12320	12260	12190	12620	---	23930	25300	24890	e23990	e23020	22410	21650
30	12310	12250	12190	12620	---	24090	25290	24840	e23960	e23000	22390	21640
31	12290	---	12210	12620	---	24220	---	24810	---	e22980	22370	---
MAX	12640	12280	12240	12620	13520	24220	25300	25360	24780	23930	22960	22350
MIN	12290	12170	12150	12210	12630	14910	24340	24810	23960	22980	22370	21640
a	290.62	290.54	290.46	291.20	292.72	306.52	307.60	307.12	e306.25	e305.22	304.55	303.73
b	-390	-40	-40	+410	+900	+10700	+1070	-480	-850	-980	-610	-730

CAL YR 1990 MAX 14230 MIN 12150 b -70
WTR YR 1991 MAX 25360 MIN 12150 b +8960

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

ESCONDIDO CREEK BASIN

11030700 LAKE WOHLFORD NEAR ESCONDIDO, CA

LOCATION.--Lat 33°09'59", long 117°00'14", in NW 1/4 NE 1/4 sec.5, T.12 S., R.1 W., San Diego County, Hydrologic Unit 18070303, near left abutment of Lake Wohlford Dam, 4.7 mi southeast of Valley Center Post Office, and 5.7 mi northeast of Escondido.

DRAINAGE AREA.--7.96 mi².

PERIOD OF RECORD.--October 1972 to current year. October 1933 to September 1972 in files of San Diego County Department of Sanitation and Flood Control.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Escondido Engineering Department). Since October 1972, supplementary water-stage recorder for flood warning only, at same site at different datum.

REMARKS.--Reservoir is formed by earthfill dam riprapped upstream and downstream, with concrete spillway anchored to natural rock. Dam was completed in 1932. Capacity at spillway level, 6,940 acre-ft, elevation, 1,480.0 ft. Dead storage below lowest outlet, 131 acre-ft, elevation, 1,420 ft. Reservoir storage includes supplemental water diverted from the San Luis Rey River via Escondido Mutual Water Co.'s canal to Lake Wohlford Reservoir. Stored water is released for municipal use by Vista Irrigation District and city of Escondido.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 7,140 acre-ft, Feb. 21, 1980, elevation, 1,480.9 ft; minimum, 1,050 acre-ft, Dec. 23-25, 1978, elevation, 1,440.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 6,440 acre-ft, June 28, elevation, 1,477.71 ft; minimum, 3,990 acre-ft, Dec. 18-20, elevation, 1,464.85 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by city of Escondido, dated March 1955)

1,440	1,000	1,455	2,510	1,470	4,910
1,445	1,410	1,460	3,220	1,475	5,880
1,450	1,910	1,465	4,020	1,481	7,160

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6160	5030	4010	4000	4040	4340	5740	5700	5910	6390	6300	5950
2	6160	4980	4010	4000	4040	4360	5780	5680	5930	6370	6250	5940
3	6160	4940	4010	4000	4040	4390	5800	5660	5970	6350	6210	5930
4	6160	4900	4010	4010	4050	4410	5810	5650	6000	6320	6170	5920
5	6150	4850	4010	4010	4050	4420	5830	5630	6020	6300	6130	5920
6	6150	4800	4010	4010	4040	4430	5840	5590	5970	6270	6120	5870
7	6160	4750	4010	4010	4040	4440	5850	5540	6030	6250	6120	5870
8	6160	4710	4000	4020	4040	4450	5870	5490	6060	6230	6120	5870
9	6120	4660	4000	4020	4040	4450	5880	5440	6090	6230	6120	5870
10	6070	4610	4000	4020	4040	4450	5880	5400	6120	6240	6120	5860
11	6020	4570	4000	4020	4040	4460	5880	5350	6140	6250	6120	5860
12	5970	4520	4000	4020	4040	4470	5880	5330	6180	6260	6120	5860
13	5920	4470	4000	4020	4040	4480	5880	5300	6200	6270	6100	5850
14	5880	4430	4000	4030	4040	4490	5880	5270	6230	6280	6090	5850
15	5830	4380	4000	4030	4040	4500	5880	5230	6250	6280	6090	5860
16	5790	4340	4000	4020	4040	4510	5890	5200	6280	6280	6080	5860
17	5740	4300	4000	4020	4030	4520	5890	5210	6300	6280	6080	5860
18	5690	4260	3990	4020	4030	4540	5880	5230	6320	6290	6090	5850
19	5650	4210	3990	4020	4030	4600	5870	5260	6340	6290	6090	5840
20	5600	4190	4000	4020	4030	4760	5850	5280	6280	6290	6080	5850
21	5550	4160	4000	4020	4030	4870	5840	5330	6280	6300	6080	5850
22	5500	4140	4010	4020	4030	4940	5820	5380	6300	6300	6070	5830
23	5450	4110	4010	4010	4030	4980	5810	5440	6330	6300	6070	5790
24	5400	4080	4010	4010	4030	4990	5800	5490	6350	6300	6060	5780
25	5350	4040	4000	4010	4030	5040	5780	5540	6370	6290	6070	5780
26	5310	4010	4000	4010	4020	5130	5770	5600	6400	6290	6060	5770
27	5260	4000	4000	4010	4050	5380	5750	5650	6410	6300	5970	5770
28	5210	4000	4000	4010	4150	5430	5740	5700	6430	6300	5940	5770
29	5170	4000	4000	4010	---	5530	5730	5760	6420	6300	5940	5770
30	5120	4000	4000	4040	---	5620	5720	5810	6420	6290	5930	5770
31	5080	---	4000	4040	---	5680	---	5870	---	6320	5930	---
MAX	6160	5030	4010	4040	4150	5680	5890	5870	6430	6390	6300	5950
MIN	5080	4000	3990	4000	4020	4340	5720	5200	5910	6230	5930	5770
a	1470.90	1464.88	1464.87	1465.13	1465.79	1474.03	1474.21	1474.95	1477.61	1477.13	1475.27	1474.46
b	-1070	-1080	0	+40	+110	+1530	+40	+150	+550	-100	-390	-160

CAL YR 1990 MAX 6480 MIN 2270 b +1710
WTR YR 1991 MAX 6430 MIN 3990 b -380

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11039600 BUBBLE-UP CREEK NEAR PALA, CA

LOCATION.--Lat 33°20'41", long 117°04'12", in SE 1/4 SE 1/4 sec.34, T.9 S., R.2 W., San Diego County, Hydrologic Unit 18070303, on left bank 0.6 mi upstream from Lilac Road and 1.4 mi south of Pala.

DRAINAGE AREA.--4.11 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1990 to September 1991.

GAGE.--Water-stage recorder. Elevation of gage is 460 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Peak discharges greater than base discharge of 20 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	Unknown	*e130	Unknown	Mar. 27	0315	73	4.93

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e19	e.30	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	e8.6	e.25	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	e2.0	e.20	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	e.80	e.10	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	e1.1	e.12	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	e1.7	e.15	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	e1.4	e.05	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	e.20	e.05	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	e.15	e.04	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	e.10	e.02	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	e.20	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	e.05	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	e.10	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	e1.2	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	e6.8	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	e2.8	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	e2.0	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	e1.5	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	e1.0	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e6.4	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	7.2	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	23	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	e6.0	6.2	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	2.5	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1.5	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.94	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	6.00	98.44	1.28	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.21	3.18	.043	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	6.0	23	.30	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	12	195	2.5	.00	.00	.00	.00	.00

WTR YR 1991 TOTAL 105.72 MEAN .29 MAX 23 MIN .00 AC-FT 210

e Estimated.

SAN LUIS REY RIVER BASIN

11039600 BUBBLE-UP CREEK NEAR PALA, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--October 1990 to September 1991.

INSTRUMENTATION.--Recording tipping-bucket rain gage.

REMARKS.--Periods of missing record due to rain gage malfunctions.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.87 in, Mar. 1, 1991; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	.00	.00	2.87	---	---	.00	.00	.00	.00
2	---	---	---	.00	.00	.00	---	---	.00	.00	.00	.00
3	---	---	---	.27	.00	.00	---	---	.00	.00	.00	.00
4	---	---	---	.26	.00	.00	---	---	.00	.00	.00	.00
5	---	---	---	.03	.00	.04	---	---	.00	.00	.00	.00
6	---	---	---	.00	.00	.00	---	---	.00	.00	.00	.00
7	---	---	---	.00	.00	.00	---	---	.00	.00	.00	.00
8	---	---	---	.00	.00	.00	---	---	.00	.00	.00	.00
9	---	---	---	.34	.00	.00	---	---	.00	.00	.00	.00
10	---	---	---	.01	.00	.00	---	---	.00	.00	.00	e.00
11	---	---	---	.00	.00	.08	---	---	.00	.00	.00	e.00
12	---	---	---	.00	.00	.00	---	---	.00	.00	.00	.00
13	---	---	---	.00	.00	.47	---	---	.00	.00	.00	.00
14	---	---	---	.00	.00	.01	---	---	.00	.00	.00	.00
15	---	---	---	.00	.00	.21	---	---	.00	.00	.00	.00
16	---	---	---	.00	.00	.00	---	---	.00	.00	.00	.00
17	---	---	---	.00	.00	.00	---	---	.00	.00	.00	.00
18	---	---	.00	.00	.00	.14	---	---	.00	.00	.00	.00
19	---	---	.23	.00	.01	.97	---	---	.00	.00	.00	.00
20	---	---	.09	.00	.00	1.23	---	---	.00	.00	.00	.04
21	---	---	.00	.00	.00	.21	---	---	.00	.00	.00	.01
22	---	---	.00	.00	.00	.00	---	---	.00	.00	.00	.00
23	---	---	.00	.00	.00	.00	---	---	.00	.00	.00	.00
24	---	---	.00	.00	.00	.00	---	---	.00	.00	.00	.00
25	---	---	.00	.00	.00	.54	---	---	.00	.00	.00	.00
26	---	---	.00	.00	.00	.96	---	---	.00	.00	.00	.00
27	---	---	.00	.00	1.76	1.19	---	---	.00	.00	.00	.00
28	---	---	.00	.00	2.00	.00	---	---	.00	.00	.00	.00
29	---	---	.00	.00	---	.00	---	.00	.00	.00	.00	.00
30	---	---	.00	.00	---	.00	---	.00	.00	.00	.00	.00
31	---	---	.00	.00	---	.00	---	.00	---	.20	.00	---
TOTAL	---	---	---	0.91	3.77	8.92	---	---	0.00	0.20	0.00	0.05

e Estimated.

11039600 BUBBLE-UP CREEK NEAR PALA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: March 1991.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	
MAR												
08...	1415	2110	8.2	17.0	--	840	180	95	140	27	2	3.1
19...	1100	1250	8.1	13.0	440	420	94	45	82	30	2	2.6
21...	1145	1130	8.4	12.0	100	380	83	43	83	32	2	2.4

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
MAR											
08...	243	370	360	0.20	42	1280	1360	1.74	--	0.040	--
19...	125	240	170	0.20	28	778	766	1.06	0.040	0.040	6.60
21...	116	210	140	0.20	33	720	693	0.98	0.040	0.030	6.40

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
MAR											
08...	4.40	--	0.040	--	--	--	--	0.030	70	<10	150
19...	6.60	0.030	0.020	1.1	0.150	0.060	0.030	0.030	60	--	--
21...	6.40	0.030	<0.010	1.2	0.150	0.060	0.050	0.040	70	--	--

SAN LUIS REY RIVER BASIN

11039800 SAN LUIS REY RIVER AT COUSER CANYON BRIDGE, NEAR PALA, CA

LOCATION.--Lat 33°20'26", Long 117°07'50", in NW 1/4 NE 1/4 sec.6, T.10 S., R.2 W., in San Diego County, Hydrologic Unit 18070303, on left bank 10 ft upstream from bridge on Couser Canyon Road, 6.5 mi northeast of Bonsall, and 27 mi downstream from Lake Henshaw.

DRAINAGE AREA.--364 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 280 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair above 10 ft³/s, poor below. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft. Several small diversions upstream from station.

AVERAGE DISCHARGE.--5 years, 1.74 ft³/s, 1,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,700 ft³/s, Mar. 27, 1991, gage height, 5.56 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,700 ft³/s, Mar. 27, gage height 5.56 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	360	18	e.15	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	156	14	e.10	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	23	7.3	e.05	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	12	5.9	e.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	6.7	5.1	e.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	4.6	19	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	2.3	18	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	e1.1	16	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	e.60	12	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	e.35	5.1	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	e.20	3.7	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	e.10	2.7	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	e.05	2.2	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	e.03	1.9	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	e.00	1.6	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	e.00	1.3	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	e.00	.98	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	e.00	.82	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	e.00	e.75	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	28	e.70	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	109	e.65	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	30	e.60	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	16	e.55	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	7.0	e.50	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	8.9	e.45	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	25	e.40	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	547	e.35	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	162	e.30	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	46	e.25	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	29	e.20	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	22	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	1596.93	141.30	0.30	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	51.5	4.71	.010	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	547	19	.15	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	3170	280	.6	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 1738.53 MEAN 4.76 MAX 547 MIN .00 AC-FT 3450

e Estimated.

11040200 KEYS CREEK TRIBUTARY AT VALLEY CENTER, CA

LOCATION.--Lat 33°13'45", Long 117°02'09", in NW 1/4 SE 1/4 sec.12, T.11 S., R.2 W., San Diego County, Hydrologic Unit 18070303, on left bank 140 ft upstream from bridge on Valley Center Road, 0.3 mi downstream from unnamed tributary, and 0.8 mi north of Valley Center.

DRAINAGE AREA.--7.65 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1970 to September 1983, October 1990 to September 1991 (seasonal record).

REVISED RECORDS.--WDR CA-83-1: 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,279.99 ft above National Geodetic Vertical Datum of 1929 (levels by San Diego County).

REMARKS.--Records poor. No regulation upstream from station. Some pumping upstream for irrigation.

AVERAGE DISCHARGE.--13 years (water years 1971-83), 2.35 ft³/s, 1,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,680 ft³/s, Feb. 21, 1980, gage height, 8.80 ft; no flow for part of most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a discharge of 990 ft³/s, by San Diego County Special District Services.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	----	unknown	6.02	Mar. 27	0410	unknown	*6.45
Mar. 20	1015	unknown	4.97				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	e.00	e.04	.02	.03	e158	e1.2	---	---	---	---	---
2	e.00	e.00	e.04	.02	.03	e2.6	e.75	---	---	---	---	---
3	e.00	e.00	e.04	.03	.03	.64	e.65	---	---	---	---	---
4	e.00	e.00	e.04	.04	.03	.47	e.60	---	---	---	---	---
5	e.00	e.00	e.04	.03	.03	.38	e.55	---	---	---	---	---
6	e.00	e.00	e.04	.03	.03	.34	e.50	---	---	---	---	---
7	e.00	e.00	e.04	.03	.03	.31	e.40	---	---	---	---	---
8	e.00	e.00	e.04	.04	.02	.31	e.35	---	---	---	---	---
9	e.00	e.00	e.04	.05	.02	.31	e.30	---	---	---	---	---
10	e.00	e.00	e.04	.04	.02	.31	e.25	---	---	---	---	---
11	e.00	e.00	e.04	.04	.02	.31	e.25	---	---	---	---	---
12	e.00	e.00	e.04	.04	.02	.32	e.25	---	---	---	---	---
13	e.00	e.00	e.04	.04	.03	.38	e.25	---	---	---	---	---
14	e.00	e.00	e.04	.03	.03	.39	e.25	---	---	---	---	---
15	e.00	e.00	.04	.03	.03	.40	e.25	---	---	---	---	---
16	e.00	e.00	.04	.03	.03	.42	e.25	---	---	---	---	---
17	e.00	e.00	.03	.03	.04	.39	e.25	---	---	---	---	---
18	e.00	e.00	.03	.02	.03	.37	e.25	---	---	---	---	---
19	e.00	e.00	.05	.03	.04	9.3	e.25	---	---	---	---	---
20	e.00	e.02	.04	.03	.04	e84	e.25	---	---	---	---	---
21	e.00	e.04	.02	.03	.04	54	e.25	---	---	---	---	---
22	e.00	e.04	.02	.03	.04	e1.3	e.25	---	---	---	---	---
23	e.00	e.04	.02	.03	.05	.59	e.25	---	---	---	---	---
24	e.00	e.03	.02	.03	.05	.43	e.25	---	---	---	---	---
25	e.00	e.03	.02	.03	.05	2.9	e.25	---	---	---	---	---
26	e.00	e.05	.03	.03	.06	33	e.25	---	---	---	---	---
27	e.00	e.04	.02	.03	e.69	e180	e.25	---	---	---	---	---
28	e.00	e.04	.02	.03	e7.7	e12	e.25	---	---	---	---	---
29	e.00	e.04	.02	.03	---	e7.8	e.25	---	---	---	---	---
30	e.00	e.04	.02	.02	---	e4.6	e.25	---	---	---	---	---
31	e.00	---	.02	.03	---	e2.4	---	---	---	---	---	---
TOTAL	0.00	0.41	1.02	0.97	9.26	558.97	10.55	---	---	---	---	---
MEAN	.000	.014	.033	.031	.33	18.0	.35	---	---	---	---	---
MAX	.00	.05	.05	.05	7.7	180	1.2	---	---	---	---	---
MIN	.00	.00	.02	.02	.02	.31	.25	---	---	---	---	---
AC-FT	.00	.8	2.0	1.9	18	1110	21	---	---	---	---	---

e Estimated.

11040200 KEYS CREEK TRIBUTARY AT VALLEY CENTER, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--December 1990 to March 1991.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Dec. 18, 1990.

REMARKS.--This is a seasonal record. No data during April due to rain gage malfunction.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.72 in, Feb. 28, 1991; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	.00	.00	1.33	---	---	---	---	---	---
2	---	---	---	.00	.00	.03	---	---	---	---	---	---
3	---	---	---	.33	.00	.00	---	---	---	---	---	---
4	---	---	---	.26	.00	.00	---	---	---	---	---	---
5	---	---	---	.01	.00	.04	---	---	---	---	---	---
6	---	---	---	.00	.00	.00	---	---	---	---	---	---
7	---	---	---	.00	.00	.00	---	---	---	---	---	---
8	---	---	---	.00	.00	.00	---	---	---	---	---	---
9	---	---	---	.33	.00	.00	---	---	---	---	---	---
10	---	---	---	.01	.00	.00	---	---	---	---	---	---
11	---	---	---	.00	.00	.18	---	---	---	---	---	---
12	---	---	---	.00	.00	.01	---	---	---	---	---	---
13	---	---	---	.00	.00	.18	---	---	---	---	---	---
14	---	---	---	.00	.00	.08	---	---	---	---	---	---
15	---	---	---	.00	.00	.27	---	---	---	---	---	---
16	---	---	---	.02	.00	.01	---	---	---	---	---	---
17	---	---	---	.00	.00	.00	---	---	---	---	---	---
18	---	---	.00	.00	.00	.05	---	---	---	---	---	---
19	---	---	.42	.00	.00	1.11	---	---	---	---	---	---
20	---	---	.08	.00	.00	1.37	---	---	---	---	---	---
21	---	---	.01	.00	.00	.12	---	---	---	---	---	---
22	---	---	.01	.00	.00	.00	---	---	---	---	---	---
23	---	---	.00	.00	.00	.00	---	---	---	---	---	---
24	---	---	.00	.00	.00	.00	---	---	---	---	---	---
25	---	---	.00	.01	.00	.50	---	---	---	---	---	---
26	---	---	.00	.00	.00	.74	---	---	---	---	---	---
27	---	---	.00	.00	1.45	.89	---	---	---	---	---	---
28	---	---	.00	.00	2.72	.00	---	---	---	---	---	---
29	---	---	.01	.00	---	.00	---	---	---	---	---	---
30	---	---	.00	.00	---	.00	---	---	---	---	---	---
31	---	---	.00	.00	---	.00	---	---	---	---	---	---
TOTAL	---	---	---	0.97	4.17	6.91	---	---	---	---	---	---

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 33°13'05", long 117°22'34", in SE 1/4 SW 1/4 sec.13, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070303, on right bank 1.9 mi upstream from bridge on Interstate Highway 5, 2.4 mi upstream from mouth, and 1.9 mi northeast of Oceanside.

DRAINAGE AREA.--557 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942, October 1946 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. April 1912 to September 1914, nonrecording gage at site 0.4 mi downstream at different datum. January 1916, nonrecording gage 1.4 mi downstream at different datum. Prior to Oct. 1, 1978, at datum 10.00 ft lower. Prior to Nov. 9, 1981, at site 0.8 mi downstream at different datum.

REMARKS.--Records fair. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft since 1923. Several diversions for irrigation and domestic use upstream from station. AVERAGE DISCHARGE represents flow to ocean during period of record regardless of upstream development.

AVERAGE DISCHARGE.--59 years (water years 1913-14, 1930-41, 1947-91), 34.5 ft³/s, 25,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,600 ft³/s, Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in some years. Since regulation by Lake Henshaw, maximum discharge, 25,000 ft³/s, Feb. 21, 1980, gage height, 14.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,610 ft³/s, Mar. 1, gage height, 17.17 ft; minimum daily, 1.5 ft³/s, Oct. 21-23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.8	3.0	6.6	10	1880	171	42	22	13	10	6.0
2	2.4	1.8	3.0	6.9	10	1390	156	43	21	13	7.1	5.9
3	2.5	1.8	3.0	7.7	10	318	144	40	21	12	8.0	5.7
4	2.4	1.8	2.9	11	11	176	130	39	21	12	7.7	5.7
5	2.5	1.9	2.8	9.4	11	128	121	37	20	12	7.9	6.0
6	2.7	2.0	2.8	8.2	11	102	113	36	20	12	7.9	5.6
7	2.7	2.0	2.8	7.7	11	84	110	35	19	12	8.0	5.4
8	2.6	1.9	2.8	7.6	11	72	107	34	19	12	7.7	5.4
9	2.4	1.9	2.8	9.7	11	63	102	33	19	12	7.5	5.6
10	e2.3	1.9	2.9	11	11	56	97	32	19	12	7.4	5.5
11	e2.3	1.9	3.0	7.7	12	50	90	31	18	12	7.3	5.7
12	e2.2	2.0	3.3	6.4	12	46	83	31	18	12	6.8	6.4
13	e2.2	2.1	3.6	5.7	12	43	74	30	18	11	6.9	5.8
14	e2.1	2.2	4.3	5.5	12	42	70	30	17	11	7.5	4.8
15	e2.0	2.2	4.8	5.4	12	42	70	30	16	10	7.6	4.6
16	e1.8	2.2	5.3	5.9	12	40	69	29	16	10	7.3	4.6
17	e1.7	2.3	5.5	6.2	12	39	65	28	15	10	6.6	4.5
18	e1.6	2.4	5.7	6.4	11	38	59	27	15	10	6.6	4.6
19	e1.6	2.5	6.2	6.9	11	69	55	28	15	9.5	6.2	4.4
20	1.6	11	8.3	7.6	11	168	56	27	14	9.4	6.4	4.4
21	1.5	7.9	7.7	7.8	11	479	55	26	14	9.1	6.4	4.4
22	1.5	5.3	7.3	8.3	11	323	54	26	14	9.7	6.5	4.2
23	1.5	4.1	6.7	8.4	11	191	53	25	14	13	6.5	4.2
24	1.6	3.6	6.3	8.6	10	153	51	24	13	11	6.4	4.3
25	1.6	3.3	6.2	9.0	10	173	51	24	12	9.8	6.4	4.3
26	1.6	3.4	6.2	9.2	10	351	50	24	13	9.8	5.9	4.3
27	1.6	3.3	6.2	9.6	16	2100	48	24	13	9.2	6.3	4.3
28	1.7	3.2	6.3	9.9	53	829	48	24	13	9.2	6.2	4.2
29	1.7	3.1	6.4	10	---	337	46	23	12	9.2	5.3	4.1
30	1.7	3.0	6.4	10	---	240	44	23	12	8.1	5.6	4.1
31	1.7	---	6.4	10	---	196	---	23	---	10	6.2	---
TOTAL	61.6	89.8	150.9	250.3	356	10218	2442	928	493	335.0	216.1	149.0
MEAN	1.99	2.99	4.87	8.07	12.7	330	81.4	29.9	16.4	10.8	6.97	4.97
MAX	2.7	11	8.3	11	53	2100	171	43	22	13	10	6.4
MIN	1.5	1.8	2.8	5.4	10	38	44	23	12	8.1	5.3	4.1
AC-FT	122	178	299	496	706	20270	4840	1840	978	664	429	296

CAL YR 1990 TOTAL 3708.4 MEAN 10.2 MAX 44 MIN 1.5 AC-FT 7360
WTR YR 1991 TOTAL 15689.7 MEAN 43.0 MAX 2100 MIN 1.5 AC-FT 31120

e Estimated.

SAN LUIS REY RIVER BASIN

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.
 CHEMICAL DATA: Water years 1978 to current year.
 BIOLOGICAL DATA: Water years 1978-81.
 SPECIFIC CONDUCTANCE: Water years 1978-81.
 WATER TEMPERATURE: Water years 1971-81.
 SEDIMENT DATA: Water years 1969 to current year.

PERIOD OF DAILY RECORD.--
 SUSPENDED-SEDIMENT DISCHARGE: October 1968 to September 1978, December 1983 to September 1984.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CaCO3)
NOV 16...	0930	2.3	2690	7.9	13.5	1.0	760	7.8	76	160	51	840
JAN 23...	1100	8.3	2450	8.0	11.0	2.0	765	10.5	96	22	K35	760
MAR 14...	1415	42	1950	7.8	16.5	2.6	760	8.4	87	K880	900	610
MAY 29...	1300	22	2300	8.1	21.5	8.4	760	7.4	85	67	67	710
JUL 10...	1030	12	2340	7.9	21.0	5.5	760	7.5	85	63	210	690
SEP 26...	1115	4.0	2480	7.9	21.0	1.5	760	6.4	73	73	410	740

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CaCO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)
NOV 16...	570	190	89	260	40	4	10	334	0	274	510	490
JAN 23...	510	170	81	230	39	4	9.6	308	0	252	440	420
MAR 14...	400	130	68	180	39	3	8.4	253	0	207	420	300
MAY 29...	450	150	82	220	40	4	7.5	322	0	264	500	350
JUL 10...	470	140	82	220	41	4	10	259	0	212	450	370
SEP 26...	500	160	83	250	42	4	9.6	298	0	244	480	430

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
NOV 16...	0.50	18	1670	1740	2.27	0.010	<0.010	0.600	0.600	0.080	0.060	0.50
JAN 23...	0.30	19	1600	1530	2.18	0.010	0.010	1.50	1.50	0.020	0.020	0.50
MAR 14...	0.30	23	1270	1270	1.73	0.030	0.040	3.10	3.30	0.090	0.030	1.0
MAY 29...	0.30	15	1530	1490	2.08	0.030	0.020	1.70	1.70	0.050	0.060	1.2
JUL 10...	0.30	--	1530	1400	2.08	0.010	0.010	0.370	0.390	0.040	0.040	0.60
SEP 26...	0.40	18	1650	1580	2.24	<0.010	<0.010	0.220	0.240	0.030	0.020	0.30

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV 16...	0.170	0.150	0.200	0.170	<10	<1	100	<10	<1.0	<1	1	1
JAN 23...	0.100	0.080	0.090	0.090	--	--	--	--	--	--	--	--
MAR 14...	0.170	0.150	0.140	0.100	<10	<1	76	0.6	<1.0	<1	<3	2
MAY 29...	0.160	0.110	0.130	0.110	<10	<1	200	<10	<1.0	<1	<1	2
JUL 10...	0.260	0.190	0.190	0.170	--	--	--	--	--	--	--	--
SEP 26...	0.300	0.230	0.230	0.210	20	1	100	<10	<1.0	<10	<1	<1

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	VANADIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 16...	10	<1	<10	150	0.1	3	1	--	<1.0	1000	13	<10
JAN 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 14...	10	<1	9	35	0.1	10	1	1	<1.0	620	<6	10
MAY 29...	20	1	<10	260	<0.1	11	1	<1	<1.0	740	17	<10
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 26...	<10	<1	<10	230	<0.1	8	<1	<1	<1.0	800	15	12

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, SATURATION	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 29...*	1110	0.50	7.00	2260	7.9	19.5	760	6.4	70	52	76	
29...*	1130	0.60	48.0	2300	7.9	19.5	760	6.3	69	35	92	
29...*	1145	0.65	84.0	2310	7.9	19.5	760	6.6	73	28	96	
29...*	1155	0.50	120	2300	7.9	19.5	760	7.4	81	37	86	
29...*	1210	1.20	200	2300	8.0	19.5	760	7.4	81	64	93	
SEP 26...*	1015	0.44	2.00	2480	7.8	21.0	760	6.7	76	31	50	
26...*	1020	0.28	20.0	2480	7.8	21.0	760	6.4	73	--	--	
26...*	1030	0.53	37.0	2480	7.8	21.0	760	6.1	69	8	88	
26...*	1045	0.52	158	2470	7.9	22.0	760	7.5	87	--	--	

* Instantaneous streamflow at time of cross-sectional measurement: May 29, 22 ft³/s; Sept. 26, 4.0 ft³/s.

SAN LUIS REY RIVER BASIN

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
JAN								
23...	1100	8.3	11.0	22	0.49	--	--	--
FEB								
15...*	1615	12	16.0	20	0.65	--	--	--
MAR								
02...*	1545	950	16.0	570	1460	--	--	--
02...*	1600	932	16.0	547	1380	--	--	--
14...*	1415	42	16.5	9	1.0	--	--	--
26...*	1100	354	14.5	86	82	--	--	--
27...*	1800	3150	12.5	2300	19600	26	30	35
27...*	1900	2950	12.5	1930	15400	--	--	--
APR								
18...*	1045	60	18.0	73	12	--	--	--
MAY								
29...	1140	22	19.5	43	2.6	--	--	--
29...	1300	22	21.5	34	2.0	--	--	--
JUN								
26...*	1630	13	26.5	38	1.3	--	--	--
JUL								
10...	1030	12	21.0	31	1.0	--	--	--
AUG								
08...*	1315	7.4	28.0	19	0.38	--	--	--
SEP								
26...	1115	4.0	21.0	34	0.37	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
JAN								
23...	--	--	50	--	--	--	--	--
FEB								
15...	--	--	39	--	--	--	--	--
MAR								
02...	--	--	51	56	69	92	100	--
02...	--	--	67	--	--	--	--	--
14...	--	--	77	--	--	--	--	--
26...	--	--	88	91	95	100	--	--
27...	41	43	45	50	66	88	99	100
27...	--	--	52	--	--	--	--	--
APR								
18...	--	--	50	--	--	--	--	--
MAY								
29...	--	--	89	--	--	--	--	--
29...	--	--	86	--	--	--	--	--
JUN								
26...	--	--	46	--	--	--	--	--
JUL								
10...	--	--	88	--	--	--	--	--
AUG								
08...	--	--	80	--	--	--	--	--
SEP								
26...	--	--	69	--	--	--	--	--

* Samples were collected at different location, approximately 1.2 mi upstream from gage site.

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
AUG							
08...*	1325	1	7.4	27.0	7	18	40
08...*	1330	1	7.4	27.0	1	3	16
08...*	1335	1	7.4	27.0	0	4	43
08...*	1345	1	7.4	27.0	--	0	5
08...*	1350	1	7.4	27.0	18	40	63

DATE	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
AUG							
08...	71	92	97	98	98	98	100
08...	78	99	100	--	--	--	--
08...	92	99	99	100	--	--	--
08...	45	90	99	100	--	--	--
08...	80	92	99	100	--	--	--

* Samples were collected at different location approximately 1.2 mi upstream from gage site.

SANTA MARGARITA RIVER BASIN

11042400 TEMECULA CREEK NEAR AGUANGA, CA

LOCATION.--Lat 33°27'33", long 116°55'22", in SW 1/4 SW 1/4 sec.19, T.8 S., R.1 E., Riverside County, Hydrologic Unit 18070302, on right bank 1.6 mi downstream from Long Canyon and 3.5 mi northwest of Aguanga.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--August 1957 to current year.

REVISED RECORDS.--WDR CA-89-1: 1958(P), 1966(M), 1979(M), 1980(M), 1986(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,590 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. No regulation upstream from station. Pumping upstream from station for irrigation of less than 1,000 acres.

AVERAGE DISCHARGE.--34 years, 6.81 ft³/s, 4,930 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,200 ft³/s, Feb. 21, 1980, gage height, 12.0 ft, from floodmarks, from rating curve extended above 1,200 ft³/s; no flow for several days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0445	*3,940	*9.77	Mar. 27	0330	1,940	7.09
Mar. 20	0900	854	5.44				

Minimum daily, 0.18 ft³/s, Sept. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.30	.61	.87	1.4	1.2	e1630	e36	e6.0	2.0	.65	.88	.29
2	e.35	.55	.80	1.5	1.2	e62	e35	e6.0	1.9	.55	e.50	.24
3	e.40	.60	.71	1.8	1.2	e35	33	e6.0	1.7	.48	e.45	.18
4	e.50	.65	.76	2.4	1.2	e22	31	e5.0	1.6	.43	e.40	.18
5	.55	.67	.81	2.0	1.2	e18	30	e5.0	1.7	.42	e.35	.20
6	.50	.65	.85	1.8	1.2	e13	27	e5.0	1.7	.37	e.30	.23
7	.57	.70	.90	1.7	1.2	e10	24	e4.0	1.5	.59	.36	.43
8	.64	.73	.90	1.5	1.1	11	21	e4.1	1.4	.81	.30	.25
9	.58	.72	.91	2.0	1.1	7.5	14	4.2	1.4	.32	.26	.29
10	.58	.63	.92	2.2	1.1	7.0	e13	4.6	1.3	e.30	.25	.33
11	.55	.63	.95	1.8	1.2	7.9	e13	4.5	1.2	e.30	.26	.35
12	.49	.82	.97	1.7	1.2	6.8	e13	3.8	1.1	e.30	.31	.37
13	.53	.78	.95	1.6	1.1	19	e12	3.5	1.2	e.30	.27	.38
14	.54	.76	1.0	1.6	1.1	9.9	e12	3.5	1.3	e.25	.28	.41
15	.58	.79	1.0	1.5	1.1	3.6	e12	3.4	1.4	e.25	.24	.52
16	.59	.79	.90	1.4	1.1	3.3	e11	3.1	1.2	e.25	.37	.46
17	.65	.79	1.0	1.4	1.2	2.4	e11	3.0	1.1	e.25	.37	.34
18	.59	.81	1.2	1.4	1.3	2.0	e11	3.0	1.0	e.25	.37	.34
19	.65	.87	1.3	1.4	1.3	76	e10	2.9	.97	.38	.28	.36
20	.75	.95	1.9	1.3	1.2	159	e10	2.8	.97	.48	.24	.39
21	.72	.90	1.7	1.5	1.2	63	e10	2.9	.96	.49	.23	.39
22	.72	.94	1.5	1.5	1.3	39	e9.0	2.9	1.0	e.45	.23	.47
23	.72	.91	1.4	1.4	1.3	30	e9.0	2.6	1.0	e.45	.22	.44
24	.70	.88	1.4	1.4	1.2	26	e9.0	2.3	1.0	e.40	.23	.32
25	.67	.92	1.5	1.4	1.2	62	e8.0	2.1	1.1	e.40	.22	.29
26	.55	1.0	1.4	1.4	1.2	48	e8.0	2.0	1.1	e.35	.22	.30
27	.56	.98	1.3	1.3	1.4	590	e8.0	2.1	1.2	e.35	.22	.29
28	.54	.97	1.5	1.2	e565	115	e7.0	2.1	1.2	e.30	.22	.42
29	.60	.94	1.4	1.2	---	e78	e7.0	2.1	.97	e.30	.22	.33
30	.61	.94	1.4	1.2	---	e45	e7.0	2.2	.84	e.30	.21	.33
31	.56	---	1.5	1.2	---	e39	---	2.3	---	3.5	.32	---
TOTAL	17.84	23.88	35.60	48.1	597.3	3240.4	461.0	109.0	38.01	15.22	9.58	10.12
MEAN	.58	.80	1.15	1.55	21.3	105	15.4	3.52	1.27	.49	.31	.34
MAX	.75	1.0	1.9	2.4	565	1630	36	6.0	2.0	3.5	.88	.52
MIN	.30	.55	.71	1.2	1.1	2.0	7.0	2.0	.84	.25	.21	.18
AC-FT	35	47	71	95	1180	6430	914	216	75	30	19	20

CAL YR 1990 TOTAL 532.64 MEAN 1.46 MAX 41 MIN .20 AC-FT 1060
WTR YR 1991 TOTAL 4606.05 MEAN 12.6 MAX 1630 MIN .18 AC-FT 9140

e Estimated.

SANTA MARGARITA RIVER BASIN

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11042490 WILSON CREEK ABOVE VAIL LAKE, NEAR RADEC, CA

LOCATION.--Lat 33°29'12", long 116°54'37", in SE 1/4 SE 1/4 sec.7, T.8 S., R.1 E., Riverside County, Hydrologic Unit 18070302, on right bank 1.7 mi north of Radec and 3.9 mi northwest of Aguanga.

DRAINAGE AREA.--122 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. No regulation upstream from station. Pumping and diversion upstream from station for local irrigation.

EXTREME FOR PERIOD OF RECORD.--Maximum discharge, 185 ft³/s, Mar. 1, 1991, gage height, 5.12 ft, from rating curve extended above 20 ft³/s; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0315	*185	*5.12				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	32	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.21	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	1.2	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	2.7	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	2.70	33.41	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.096	1.08	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	2.7	32	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	5.4	66	.00	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 36.11 MEAN .099 MAX 32 MIN .00 AC-FT 72

SANTA MARGARITA RIVER BASIN

11042510 VAIL LAKE NEAR TEMECULA, CA

LOCATION.--Lat 33°29'44", long 116°58'33", in Pauba Grant, Riverside County, Hydrologic Unit 18070302, near center of Vail Dam on Temecula Creek, 0.2 mi downstream from Arroyo Seco, and 10 mi east of Temecula.

DRAINAGE AREA.--320 mi².

PERIOD OF RECORD.--October 1960 to September 1985 (monthend contents only). Prior to October 1977, published with Temecula Creek at Vail Dam. October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by the U.S. Bureau of Reclamation). June 4, 1969 to September 1985, nonrecording gage.

REMARKS.--Reservoir is formed by concrete arch-type dam, completed in June 1949. Total capacity, 49,370 acre-ft between elevations 1,352.5 ft, bottom of lowest outlet, and 1,470 ft, crest of spillway, all of which is available for release. There had been no spill from Nov. 13, 1948, date of closure, to Feb. 20, 1980, when a peak spill of about 8,000 ft³/s occurred (from theoretical discharge curve). Water is released down Temecula Creek for diversion about 1 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 52,670 acre-ft, Feb. 21, 1980, elevation, 1,473.0 ft, from highwater mark; minimum 1,038 acre-ft, Oct. 31, 1960, elevation, 1,379.44 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 27,610 acre-ft, Apr. 8, elevation, 1,446.51 ft; minimum, 16,990 acre-ft, Nov. 23, 28, elevation, 1,431.04 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table dated Dec. 22, 1953)

1,390	2,400	1,420	11,400	1,450	30,420
1,400	4,530	1,430	16,390	1,460	39,280
1,410	7,560	1,440	22,780	1,475	54,940

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17420	17240	17150	17140	17250	22030	e27110	27140	25870	25010	23830	22350
2	17420	17220	17150	17140	17250	22270	e27260	27090	25820	25010	23770	22300
3	17410	17210	17140	17150	17250	22320	e27410	27070	25770	24990	23710	22270
4	17420	17210	17150	17170	17260	22370	27560	27050	25730	24980	23670	22210
5	17420	17210	17140	17180	17260	22700	27560	27010	25670	24980	23610	22170
6	17410	17190	17140	17180	17250	22710	27580	26970	25630	24960	23570	22120
7	17400	17190	17140	17190	17270	22730	27600	26920	25580	24960	23540	22070
8	17370	17190	17130	17190	17270	22730	27590	26890	25540	24950	23490	22020
9	17370	17190	17130	17210	17270	22730	27600	26820	25490	24950	23440	21970
10	17360	17180	17140	17210	17270	22740	27570	26790	25450	24930	23400	21940
11	17350	17180	17140	17220	17270	22740	27540	26760	25400	24870	23370	21930
12	17340	17180	17120	17220	17270	22750	27530	26740	25350	24800	23320	21910
13	17340	17180	17130	17220	17270	22810	27530	26690	25310	24790	23270	21910
14	17340	17180	17130	17240	17270	22850	27530	26640	25270	24780	23210	21890
15	17330	17180	17140	17240	17270	22860	27510	26620	25230	24760	23170	21890
16	17330	17170	17140	17230	17270	22840	27490	26580	25190	24680	23120	21880
17	17330	17170	17140	17240	17280	22810	27480	26520	25160	24590	23070	21880
18	17310	17170	17140	17240	17280	22790	27460	26460	25130	24530	23040	21870
19	17310	17170	17140	17240	17270	23090	27420	26420	25130	24480	22980	21870
20	17300	17180	17150	17240	17280	23750	27400	26400	25100	24420	22960	21860
21	17290	17180	17150	17230	17270	23950	27380	26330	25100	24370	22890	21850
22	17290	17180	17150	17240	17270	24040	27360	26310	25080	24330	22840	21870
23	17280	17170	17120	17240	17270	24100	27370	26270	25080	24280	22790	21870
24	17280	17180	17120	17240	17270	24100	27380	26230	25070	24220	22740	21850
25	17270	17170	17130	17240	17270	24220	27360	26180	25060	24160	22690	21850
26	17270	17170	17120	17240	17270	24450	27330	26120	25060	24110	22640	21850
27	17270	17170	17120	17240	17380	26170	27310	26070	25050	24070	22580	21830
28	17250	17140	17130	17240	18510	26500	27290	26040	25030	24010	22530	21820
29	17250	17140	17130	17250	---	26700	27250	26010	25010	23950	22480	21810
30	17240	17150	17130	17250	---	26840	27190	25930	25010	23900	22440	21810
31	17240	---	17130	17250	---	26960	---	25910	---	23870	22390	---
MAX	17420	17240	17150	17250	18510	26960	27600	27140	25870	25010	23830	22350
MIN	17240	17140	17120	17140	17250	22030	27110	25910	25010	23870	22390	21810
a	1431.46	1431.31	1431.27	1431.28	1433.55	1445.67	1445.97	1444.29	1443.10	1441.54	1439.45	1438.61
b	-190	-90	-20	+120	+1260	+8450	+230	-1280	-900	-1140	-1480	-580

CAL YR 1990 MAX 18810 MIN 17120 b -980
WTR YR 1991 MAX 27600 MIN 17120 b +4380

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11042631 PECHANGA CREEK NEAR TEMECULA, CA

LOCATION.--Lat 33°28'06", long 117°07'40", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank on upstream side of Highway S-16 bridge, 0.4 mi upstream from Temecula Creek, and 2.1 mi southeast of Temecula.

DRAINAGE AREA.--13.8 mi².

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,010 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 225 ft³/s, Mar. 1, 1991, gage height, 4.66 ft; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0515	*e225	*4.66	Mar. 27	0345	unknown	4.10

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e41	e.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	e1.0	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	e.10	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	e.25	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	e.10	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	e1.0	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	e10	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	e2.0	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	e.50	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	e2.0	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.39	e35	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	5.7	e6.0	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	e.50	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	e.25	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	e.14	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	6.09	99.84	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.22	3.22	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	5.7	41	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	12	198	.00	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 1.34 MEAN .004 MAX .56 MIN .00 AC-FT 2.7
WTR YR 1991 TOTAL 105.93 MEAN .29 MAX 41 MIN .00 AC-FT 210

e Estimated.

SANTA MARGARITA RIVER BASIN

11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA

LOCATION.--Lat 33°31'56", long 117°10'34", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank at upstream end of Jefferson Road bridge, 0.6 mi upstream from its confluence with Murrieta Creek, and 2.8 mi southeast of Murrieta.

DRAINAGE AREA.--55.4 mi².

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,040 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Rancho California Water District can discharge into creek from automated pump, approximately 0.1 mi upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft³/s, Mar. 1, 1991, gage height, 8.71 ft, from floodmarks, no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	Unknown	*3,670	*8.71	Mar. 27	0530	1,950	6.91
Mar. 20	1215	617	4.86				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	.00	.00	.05	e1070	1.5	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.02	66	.56	.00	.00	.00	.00	.00
3	.00	.00	.00	.15	.02	2.3	.00	.00	.00	.00	.00	.00
4	.00	.03	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.70	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	1.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.03	.00	.00	.76	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	1.7	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
14	.65	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	3.3	.00	.00	.36	.00	.00	.00	.00	.00	.00	.00	.00
16	1.4	.00	.00	.23	.00	.00	.00	.00	.00	.00	.00	.00
17	.05	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.03	.01	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.31	.24	.02	.00	12	.00	.00	.00	.00	.00	.00
20	.00	.88	.18	.00	.00	144	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	58	.00	.00	.00	.00	.00	.00
22	.00	.62	.00	.01	.00	9.9	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.01	.00	1.6	.00	.00	.00	.00	.00	.00
24	.00	.00	.02	.30	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.01	1.6	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.15	.00	.16	.00	65	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.83	20	781	.00	.00	.00	.00	.00	.00
28	.00	.00	.05	.03	93	64	.00	.00	.00	.00	.00	.00
29	.00	.01	.01	.00	---	12	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	5.6	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	2.2	---	.00	---	.00	.00	---
TOTAL	9.16	2.02	0.54	4.54	113.09	2293.61	2.06	0.00	0.00	0.00	0.00	0.00
MEAN	.30	.067	.017	.15	4.04	74.0	.069	.000	.000	.000	.000	.000
MAX	3.3	.88	.24	1.6	93	1070	1.5	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	18	4.0	1.1	9.0	224	4550	4.1	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 50.32 MEAN .14 MAX 12 MIN .00 AC-FT 100
WTR YR 1991 TOTAL 2425.02 MEAN 6.64 MAX 1070 MIN .00 AC-FT 4810

e Estimated.

SANTA MARGARITA RIVER BASIN

159

11042900 SANTA GERTRUDIS CREEK NEAR TEMECULA, CA

LOCATION.--Lat 33°31'32", long 117°09'36", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank 1.0 mi upstream from Murrieta Creek, 1.5 mi downstream from Tocalota Creek, and 2.2 mi northeast of Temecula.

DRAINAGE AREA.--92.8 mi².

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,045 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation upstream from station. Flow less than 1 ft³/s from local landscape irrigation runoff at times bypasses station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 972 ft³/s, Mar. 1, 1991, gage height, 7.10 ft; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0745	*972	*7.10	Mar. 27	0500	610	6.61
Mar. 20	1115	433	6.24				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	310	e10	e.00	e.00	e.00	e.00	e.00
2	.00	.00	.00	.00	.00	11	e8.6	e.00	e.00	e.00	e.00	e.00
3	.00	.00	.00	.00	.00	5.0	e7.2	e.00	e.00	e.00	e.00	e.00
4	.00	.00	.00	.00	.00	12	e6.0	e.00	e.00	e.00	e.00	e.00
5	.00	.00	.00	.00	.00	10	e5.0	e.00	e.00	e.00	e.00	e.00
6	.00	.00	.00	.00	.00	10	e2.0	e.00	e.00	e.00	e.00	e.00
7	.00	.00	.00	.00	.00	9.4	e.90	e.00	e.00	e.00	e.00	e.00
8	.00	.00	.00	.00	.00	8.2	e.50	e.00	e.00	e.00	e.00	e.00
9	.00	.00	.00	.00	.00	e7.0	e.25	e.00	e.00	e.00	e.00	e.00
10	.00	.00	.00	.00	.00	e7.0	e.00	e.00	e.00	e.00	e.00	e.00
11	.00	.00	.00	.00	.00	e7.0	e.00	e.00	e.00	e.00	e.00	e.00
12	.00	.00	.00	.00	.00	e6.8	e.00	e.00	e.00	e.00	e.00	e.00
13	.00	.00	.00	.00	.00	e6.6	e.00	e.00	e.00	e.00	e.00	e.00
14	.00	.00	.00	.00	.00	e6.4	e.00	e.00	e.00	e.00	e.00	e.00
15	.00	.00	.00	.00	.00	e6.2	e.00	e.00	e.00	e.00	e.00	e.00
16	.00	.00	.00	.00	.00	e6.0	e.00	e.00	e.00	e.00	e.00	e.00
17	.00	.00	.00	.00	.00	e5.8	e.00	e.00	e.00	e.00	e.00	e.00
18	.00	.00	.00	.00	.00	e5.6	e.00	e.00	e.00	e.00	e.00	e.00
19	.00	.00	.00	.00	.00	e5.4	e.00	e.00	e.00	e.00	e.00	e.00
20	.00	.00	.00	.00	.00	75	e.00	e.00	e.00	e.00	e.00	e.00
21	.00	.00	.00	.00	.00	e9.0	e.00	e.00	e.00	e.00	e.00	e.00
22	.00	.00	.00	.00	.00	e6.0	e.00	e.00	e.00	e.00	e.00	e.00
23	.00	.00	.00	.00	.00	e5.5	e.00	e.00	e.00	e.00	e.00	e.00
24	.00	.00	.00	.00	.00	e5.0	e.00	e.00	e.00	e.00	e.00	e.00
25	.00	.00	.00	.00	.00	e4.8	e.00	e.00	e.00	e.00	e.00	e.00
26	.00	.00	.00	.00	.00	e4.4	e.00	e.00	e.00	e.00	e.00	e.00
27	.00	.00	.00	.00	.78	115	e.00	e.00	e.00	e.00	e.00	e.00
28	.00	.00	.00	.00	23	e20	e.00	e.00	e.00	e.00	e.00	e.00
29	.00	.00	.00	.00	---	e13	e.00	e.00	e.00	e.00	e.00	e.00
30	.00	.00	.00	.00	---	e12	e.00	e.00	e.00	e.00	e.00	e.00
31	.00	---	.00	.00	---	e11	---	e.00	---	e.00	e.00	---
TOTAL	0.00	0.00	0.00	0.00	23.78	726.1	40.45	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.85	23.4	1.35	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	23	310	10	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	4.4	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	47	1440	80	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 1.83 MEAN .005 MAX .72 MIN .00 AC-FT 3.6
WTR YR 1991 TOTAL 790.33 MEAN 2.17 MAX 310 MIN .00 AC-FT 1570

e Estimated.

11043000 MURRIETA CREEK AT TEMECULA, CA

LOCATION.--Lat 33°28'47", long 117°08'35", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on right bank 0.4 mi upstream from confluence with Temecula Creek, 1.0 mi south of Temecula, and 12 mi downstream from Skinner Reservoir on Tualota Creek.

DRAINAGE AREA.--222 mi².

PERIOD OF RECORD.--October 1924 to current year. Prior to September 1930 monthly discharges only, published in WSP 1315-B.

REVISED RECORDS.--WSP 1345: 1952. WSP 1635: 1932, 1937. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Aug. 30, 1981. Elevation of gage is 970 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1735 for history of changes prior to Dec. 16, 1938.

REMARKS.--Records fair. Low flow regulated since 1974 by Skinner Reservoir, capacity, 43,800 acre-ft. Pumping upstream from station for irrigation. Rancho California Water District can discharge into creek, approximately 0.1 mi upstream, to supplement low flow. Varying amounts of backwater caused by beaver dams during low flow periods.

AVERAGE DISCHARGE.--67 years, 10.9 ft³/s, 7,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,800 ft³/s, Feb. 21, 1980, gage height, 13.70 ft, on basis of slope-area measurement of peak flow; no flow for many days 1989-91.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0715	11,100	11.51	Mar. 27	0445	*11,200	*11.53
Mar. 20	1130	2,300	7.00				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	.00	.00	.10	.04	3650	15	.01	1.3	.43	1.4	1.7
2	3.0	.00	.00	.12	.06	152	16	.03	1.4	.48	1.4	1.7
3	2.9	.00	.00	.40	.04	23	11	.03	1.6	.48	1.3	1.7
4	3.0	.00	.00	11	.04	11	10	.03	1.8	.48	1.3	1.9
5	2.8	.00	.00	.92	.05	15	9.3	.07	1.9	.43	1.3	3.1
6	3.1	.00	.00	.00	.06	10	9.2	.29	1.5	.43	1.5	3.5
7	3.3	.00	.00	.00	.05	8.7	7.0	.05	.50	.43	1.5	4.6
8	3.4	.00	.00	.00	.05	8.6	1.6	.00	.39	.38	1.5	4.8
9	3.3	.00	.00	7.8	.03	9.3	.27	.00	.37	.34	1.5	3.8
10	3.0	.00	.00	19	.03	7.9	.15	.00	1.1	.43	1.5	3.3
11	3.2	.00	.01	.12	.03	11	.15	.00	1.5	.43	1.5	3.7
12	3.0	.00	.00	.09	.03	8.6	.13	.00	1.4	.43	1.5	3.6
13	3.1	.00	.00	.12	.03	18	.12	.04	.63	.43	1.5	3.7
14	2.9	.00	.00	.04	.04	13	.09	.11	.20	.38	1.5	4.0
15	2.9	.00	.00	.04	.03	12	.01	.19	.21	.43	1.5	3.7
16	2.9	.00	.00	.02	.04	11	.00	.20	.24	.43	1.5	e3.5
17	3.2	.00	.00	.16	.04	4.3	.00	.19	.30	.43	1.5	e3.5
18	3.3	.00	.00	.11	.03	4.3	.00	.18	.29	1.3	1.5	e3.5
19	3.2	.00	.06	.14	.06	153	.01	.19	.25	1.7	1.5	e3.3
20	3.2	.73	.12	.08	.06	718	.02	.29	.23	1.7	1.5	e3.3
21	3.6	.00	.01	.12	.07	150	.02	.62	.21	1.5	1.5	e3.0
22	3.6	.00	.00	.10	.05	18	.03	.73	.20	1.5	1.5	e3.5
23	3.5	.00	.00	.07	.04	8.6	.04	.38	.17	1.5	1.5	e3.5
24	3.5	.00	.00	.09	.04	9.6	.02	.29	.16	1.5	1.5	e3.5
25	3.3	.00	.00	.07	.04	68	.02	.95	.17	1.4	1.5	e3.3
26	3.2	.00	.02	.06	.04	200	.02	1.1	.15	1.3	1.5	e3.0
27	3.1	.00	.02	.07	110	3000	.02	1.1	.25	1.3	1.5	e3.0
28	2.9	.00	.03	.06	891	138	.02	1.1	.43	1.3	1.4	e3.0
29	2.9	.00	.02	.04	---	30	.02	1.2	.37	1.3	1.5	e3.0
30	2.9	.00	.02	.04	---	18	.00	1.2	.43	1.4	1.5	e3.0
31	1.2	---	.05	.04	---	12	---	1.2	---	1.4	1.7	---
TOTAL	95.5	0.73	0.36	41.02	1002.12	8500.9	80.26	11.77	19.65	27.37	45.8	97.7
MEAN	3.08	.024	.012	1.32	35.8	274	2.68	.38	.65	.88	1.48	3.26
MAX	3.6	.73	.12	19	891	3650	16	1.2	1.9	1.7	1.7	4.8
MIN	1.2	.00	.00	.00	.03	4.3	.00	.00	.15	.34	1.3	1.7
AC-FT	189	1.4	.7	81	1990	16860	159	23	39	54	91	194

CAL YR 1990 TOTAL 948.33 MEAN 2.60 MAX 172 MIN .00 AC-FT 1880
WTR YR 1991 TOTAL 9923.18 MEAN 27.2 MAX 3650 MIN .00 AC-FT 19680

e Estimated.

11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA

LOCATION.--Lat 33°28'26", long 117°08'29", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank at upper end of Temecula Canyon, 0.1 mi downstream from confluence of Murrieta and Temecula Creeks, 1.4 mi south of Temecula, 10 mi downstream from Vail Dam, and about 12 mi downstream from Skinner Reservoir.

DRAINAGE AREA.--588 mi².

PERIOD OF RECORD.--January 1923 to current year. Prior to October 1952, published as Temecula Creek at Railroad Canyon, near Temecula.

REVISED RECORDS.--WSP 981: 1927(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Nov. 3, 1966; buried by sand Nov. 19, 1985, uncovered by high flow in March 1991. Elevation of gage is 950 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 3, 1966, at site 100 ft downstream at same datum.

REMARKS.--Records fair. Flow partly regulated since November 1948 by Vail Lake (station 11042510) on Temecula Creek, and since 1974 by Skinner Reservoir. Rancho California Water District can discharge into Murrieta Creek, approximately 0.1 mi upstream, to supplement low flow.

AVERAGE DISCHARGE.--25 years (water years 1924-48), unregulated, 28.2 ft³/s, 20,420 acre-ft/yr; 43 years (water years 1949-91), 15.0 ft³/s, 10,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s, Feb. 16, 1927, gage height, 14.6 ft, at site then in use, from rating curve extended above 10,000 ft³/s; minimum daily, 0.16 ft³/s, Mar. 31, Apr. 1, 11, 1988. Since partial regulation by Vail Lake and Skinner Reservoir, maximum discharge 22,000 ft³/s, Feb. 21, 1980, gage height, 16.5 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,100 ft³/s, Mar. 1, gage height, 13.55 ft, from rating curve extended above 4,000 ft³/s; minimum daily, 0.42 ft³/s, Dec. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	1.4	1.2	.86	.88	4520	e20	2.0	2.7	1.6	2.3	3.5
2	4.3	1.3	1.1	.81	.90	143	e25	2.0	2.7	1.4	2.4	3.7
3	4.3	1.3	1.3	1.9	.90	41	e20	1.8	3.1	1.4	2.4	3.3
4	4.0	1.3	1.2	13	1.1	19	18	1.8	3.4	1.6	2.4	3.5
5	4.1	1.3	1.4	3.5	1.1	17	17	1.8	3.4	1.6	2.6	3.5
6	4.2	1.2	1.5	2.4	1.1	12	18	2.0	3.3	2.6	2.6	3.7
7	3.6	1.0	1.4	1.9	.97	9.6	15	1.9	2.5	4.1	2.6	6.2
8	3.8	1.0	1.3	1.2	.84	8.9	8.3	1.7	2.5	5.1	2.6	7.2
9	3.7	.90	1.3	e8.3	.87	9.6	5.8	1.8	2.6	3.3	2.7	4.3
10	3.5	1.3	1.3	22	.84	8.0	5.2	1.6	2.8	2.6	2.7	3.9
11	3.8	1.3	.76	2.0	.77	12	3.0	1.6	3.0	2.6	2.9	3.9
12	3.6	1.3	.42	1.1	.75	8.7	2.7	1.6	3.0	2.7	2.7	3.9
13	3.6	1.3	.82	1.1	.81	15	2.7	2.1	2.7	2.9	2.6	3.9
14	3.8	1.1	.74	.96	.82	14	2.5	3.3	2.2	2.9	3.1	4.3
15	3.7	1.3	.70	.99	.85	12	2.6	3.0	2.0	2.3	3.3	4.0
16	3.7	1.3	.95	1.0	.84	12	2.5	3.0	1.9	1.8	3.3	4.1
17	3.5	1.6	1.3	1.1	.74	5.5	2.4	3.1	1.9	1.3	3.7	3.9
18	3.5	1.5	1.4	1.7	.66	5.5	2.4	3.1	1.8	1.8	3.9	3.9
19	3.9	1.7	1.8	1.2	.56	116	2.4	3.2	2.0	2.6	3.7	3.8
20	3.8	3.7	2.2	1.3	.58	e650	2.4	3.2	1.9	2.6	3.9	3.9
21	3.8	2.0	1.7	1.4	.55	154	2.4	3.3	1.7	2.7	4.1	4.6
22	3.7	1.6	1.2	1.3	.67	45	2.4	3.4	1.6	2.9	4.1	4.2
23	3.7	1.5	.99	1.2	.61	30	2.4	3.5	1.6	2.7	4.1	3.9
24	3.6	1.4	1.0	1.1	.52	29	2.4	3.6	1.8	2.7	4.6	3.6
25	3.5	1.3	.93	1.2	.52	116	2.3	3.3	2.0	2.6	4.1	3.6
26	3.6	1.5	1.0	1.1	.48	281	2.3	3.0	1.8	1.9	4.1	3.5
27	3.9	1.5	.95	.96	207	e3500	2.2	2.8	1.5	1.9	3.7	3.5
28	3.6	1.4	.86	1.2	2460	e200	2.1	3.2	2.1	1.9	2.9	3.3
29	3.4	1.3	.82	1.1	---	e30	2.8	2.9	1.9	2.1	3.5	3.2
30	3.4	1.2	.74	1.1	---	e25	2.6	2.7	1.9	2.1	3.5	3.1
31	2.6	---	.74	.96	---	e20	---	2.7	---	2.6	3.5	---
TOTAL	115.8	42.80	35.02	80.94	2687.23	10068.8	201.8	80.0	69.3	74.9	100.6	118.9
MEAN	3.74	1.43	1.13	2.61	96.0	325	6.73	2.58	2.31	2.42	3.25	3.96
MAX	4.6	3.7	2.2	22	2460	4520	25	3.6	3.4	5.1	4.6	7.2
MIN	2.6	.90	.42	.81	.48	5.5	2.1	1.6	1.5	1.3	2.3	3.1
AC-FT	230	85	69	161	5330	19970	400	159	137	149	200	236

CAL YR 1990 TOTAL 1585.01 MEAN 4.34 MAX 324 MIN .42 AC-FT 3140
WTR YR 1991 TOTAL 13676.09 MEAN 37.5 MAX 4520 MIN .42 AC-FT 27130

e Estimated.

SANTA MARGARITA RIVER BASIN

11044250 RAINBOW CREEK NEAR FALLBROOK, CA

LOCATION.--Lat 33°24'27", long 117°12'00", NW 1/4 SE 1/4 sec.9, T.9 S., R.3 W., San Diego County, Hydrologic Unit 18070302, on left bank 1.0 mi upstream of the confluence with Santa Margarita River and 3.4 mi northeast of Fallbrook.

DRAINAGE AREA.--10.3 mi².

PERIOD OF RECORD.--November 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 540 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. No regulation upstream from station. Water is imported for domestic use and irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400 ft³/s, Mar. 27, 1991, gage height, 5.48 ft, from rating curve extended above 90 ft³/s on basis of step-backwater computations; minimum daily, 0.14 ft³/s, Sept. 28, 29, 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0330	277	4.96	Mar. 27	0430	*400	*5.48
Mar. 20	0930	145	4.23				

Minimum daily, 0.14 ft³/s, Sept. 28, 29.

REVISIONS.--The maximum discharge for the 1990 water year has been revised to 126 ft³/s, Feb 17, 1990, gage height, 4.11 ft, superseding figures published in the report for 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.84	.39	.53	.49	.35	92	8.5	1.3	.64	.57	.74	.31
2	.56	.28	.43	.60	.40	6.9	7.1	1.3	.58	.36	.96	.93
3	.34	.28	.53	1.0	.51	3.5	6.0	1.5	.68	.40	.98	.33
4	.31	.30	e.59	3.0	.45	2.4	5.0	1.2	.48	.37	.84	.40
5	.39	.30	e.66	.97	.44	2.0	4.7	1.2	.55	.39	.57	.37
6	.43	.27	e.50	.56	.44	1.9	4.6	1.1	.41	.50	.57	.35
7	.32	.21	e.73	.33	.50	1.6	3.8	1.0	.62	.59	.64	.27
8	.28	.32	e.38	.30	.53	1.4	3.4	1.1	.57	.48	.50	.86
9	.64	.27	e.38	2.7	.51	1.3	2.8	.99	.57	.56	.53	.59
10	.66	.32	e.38	1.0	.51	1.2	5.4	1.1	.58	.72	.61	.33
11	.56	.36	.42	.64	.62	1.5	2.9	.87	.66	.58	.58	.33
12	.35	.34	.32	.58	.60	1.2	2.3	1.1	.58	.51	.69	.39
13	.34	.42	.28	.51	.58	3.5	2.7	.85	.64	.42	.47	.29
14	.35	.44	.30	.55	.59	1.9	2.5	.84	.58	.49	.80	.32
15	.31	.52	.42	.60	.66	3.6	2.5	.66	.48	.38	.65	.50
16	.29	.51	.42	.54	.73	2.6	2.2	.59	.51	.33	.48	.51
17	.26	.48	.33	.24	.71	1.7	2.1	.63	.56	.47	.67	.39
18	.28	.41	e.34	.18	.69	1.3	1.3	.60	.68	.52	.68	.70
19	.33	.39	e.33	.34	1.2	17	1.3	.49	.63	.71	.74	.28
20	.34	5.0	1.1	.38	1.8	38	2.0	.98	.53	.70	.52	.21
21	.38	.59	.34	.51	1.8	25	1.8	.77	.55	.77	.80	.28
22	.24	.28	.48	.36	2.1	7.6	2.0	.64	.51	.61	.57	.39
23	.62	.25	.45	.42	2.0	5.7	1.8	.72	.57	.47	.72	.35
24	.66	.35	.34	.39	2.1	6.8	1.8	.55	.59	.55	.72	.21
25	.56	.43	.39	.43	2.1	25	2.0	.72	.48	.76	1.0	.44
26	.67	.86	.41	.45	2.1	41	2.0	.46	.56	.62	.78	.38
27	.69	.17	.42	.52	14	129	1.8	.34	.44	.67	.66	.20
28	.39	.17	.49	.44	32	33	1.4	.36	.51	.74	.68	.14
29	.45	.17	.52	.38	---	20	1.4	.61	.46	.84	.57	.14
30	.37	.43	.51	.39	---	13	1.4	.56	.56	.81	.75	.35
31	.27	---	.49	.39	---	9.2	---	.66	---	1.8	.58	---
TOTAL	13.48	15.51	14.21	20.19	71.02	501.8	90.5	25.79	16.76	18.69	21.05	11.54
MEAN	.43	.52	.46	.65	2.54	16.2	3.02	.83	.56	.60	.68	.38
MAX	.84	5.0	1.1	3.0	32	129	8.5	1.5	.68	1.8	1.0	.93
MIN	.24	.17	.28	.18	.35	1.2	1.3	.34	.41	.33	.47	.14
AC-FT	27	31	28	40	141	995	180	51	33	37	42	23

CAL YR 1990 TOTAL 414.50 MEAN 1.14 MAX 17 MIN .17 AC-FT 822
WTR YR 1991 TOTAL 820.54 MEAN 2.25 MAX 129 MIN .14 AC-FT 1630

e Estimated.

11044300 SANTA MARGARITA RIVER AT FALLBROOK PUBLIC UTILITY DISTRICT SUMP, NEAR FALLBROOK, CA

LOCATION.--Lat 33°24'49", long 117°14'25", in NW 1/4 NW 1/4 sec.7, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank 0.3 mi upstream of confluence with Sandia Creek and 2.9 mi north of Fallbrook.

DRAINAGE AREA.--620 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 330 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. Flow partly regulated since November 1948 by Vail Lake (station 11042510) and since 1974 by Skinner Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s, estimated, based on critical-depth survey at downstream road crossing adjusted for inflow from Sandia Creek (station 11044350), Mar. 27, 1991, gage height, 12.57 ft (affected by backwater from debris on bridge at gage); no flow Aug. 1-4, 12-14, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,000 ft³/s, estimated, based on critical-depth survey at downstream road crossing adjusted for inflow from Sandia Creek (station 11044350), Mar. 27, 1991, gage height, 12.57 ft (affected by backwater from debris on bridge at gage); minimum daily, 1.5 ft³/s, Nov. 8, 10, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	5.5	2.1	2.5	3.0	e6000	e60	e6.1	e7.0	e3.9	e5.0	e5.3
2	5.2	4.1	1.8	2.5	3.0	e400	e50	e6.1	e7.0	e3.7	e5.0	e5.3
3	5.1	2.5	1.8	2.1	3.0	e60	e40	e6.0	e7.0	e3.6	e5.0	e5.3
4	3.7	1.8	2.1	8.7	3.0	e45	e35	e6.0	e7.0	e3.5	e5.0	e5.3
5	3.2	2.4	2.1	13	3.0	e40	e30	e6.0	e7.0	e3.4	e4.9	e5.3
6	3.0	2.1	2.1	4.1	3.0	e30	e30	e6.0	e7.0	e3.4	e4.9	e5.3
7	4.0	1.7	2.0	3.3	3.0	e25	e26	e6.0	e6.8	e3.4	e4.9	e5.8
8	3.5	1.5	1.8	3.0	3.0	e20	e23	e6.0	e6.8	e3.4	e5.0	e6.5
9	3.3	1.6	2.1	7.8	3.0	e20	e21	e6.0	e6.8	e3.5	e5.0	e6.8
10	3.5	1.5	2.1	25	3.0	e20	e19	e6.0	e6.8	e3.6	e5.0	e6.5
11	3.5	1.5	2.1	8.9	3.0	e20	e17	e6.0	e6.6	e3.7	e5.1	e5.8
12	3.8	1.7	1.9	3.8	3.0	e20	e16	e6.0	e6.4	e3.8	e5.2	e5.2
13	3.7	1.8	2.1	3.6	3.0	e20	e14	e6.1	e6.2	e3.9	e5.2	e5.0
14	4.5	1.8	2.1	3.5	3.0	e35	e12	e6.3	e5.9	e4.0	e5.3	e4.7
15	4.8	1.8	1.9	3.5	3.0	e20	e10	e6.8	e5.9	e4.1	e5.4	e4.6
16	5.1	1.8	2.1	3.5	3.0	e25	e8.9	e6.9	e5.8	e4.2	e5.5	e4.6
17	4.8	1.8	2.1	3.3	3.1	e15	e8.0	e7.0	e5.6	e4.3	e5.6	e4.6
18	4.8	2.5	1.9	3.0	3.5	e10	e7.5	e7.1	e5.6	e4.4	e5.7	e4.6
19	5.1	2.5	2.5	3.0	3.5	e200	e7.2	e7.2	e5.5	e4.4	e5.8	e4.5
20	5.6	17	5.2	3.0	3.5	e900	e7.0	e7.2	e5.5	e4.6	e5.8	e4.5
21	4.6	7.2	6.6	3.0	3.5	e300	e6.8	e7.2	e5.4	e4.6	e5.8	e4.4
22	3.9	3.6	5.5	3.0	4.1	e50	e6.6	e7.2	e5.2	e4.7	e5.8	e4.4
23	3.9	2.3	5.2	3.0	4.1	e30	e6.4	e7.2	e5.0	e4.8	e5.8	e4.4
24	4.4	1.8	4.3	3.0	4.0	e20	e6.4	e7.2	e4.7	e4.9	e5.8	e4.4
25	4.1	1.8	3.5	3.0	3.0	e130	e6.4	e7.1	e4.6	e5.0	e5.8	e4.4
26	4.1	3.3	3.5	3.0	3.0	e250	e6.3	e7.1	e4.5	e5.0	e5.8	e4.3
27	4.5	3.1	3.4	3.0	18	e5500	e6.3	e7.1	e4.4	e5.0	e5.6	e4.4
28	4.8	2.6	3.0	3.0	e1300	e650	e6.2	e7.0	e4.3	e5.0	e5.6	e4.4
29	4.8	2.1	3.0	3.0	---	e160	e6.2	e7.0	e4.2	e5.0	e5.4	e4.5
30	4.8	2.1	2.9	3.0	---	e100	e6.1	e7.0	e4.1	e5.0	e5.4	e4.6
31	4.9	---	2.5	3.0	---	e80	---	e7.0	---	e5.0	e5.3	---
TOTAL	133.5	88.8	87.3	144.1	1401.3	15195	505.3	204.9	174.6	130.8	166.4	149.7
MEAN	4.31	2.96	2.82	4.65	50.0	490	16.8	6.61	5.82	4.22	5.37	4.99
MAX	5.6	17	6.6	25	1300	6000	60	7.2	7.0	5.0	5.8	6.8
MIN	3.0	1.5	1.8	2.1	3.0	10	6.1	6.0	4.1	3.4	4.9	4.3
AC-FT	265	176	173	286	2780	30140	1000	406	346	259	330	297

CAL YR 1990 TOTAL 2161.62 MEAN 5.92 MAX 337 MIN .00 AC-FT 4290
WTR YR 1991 TOTAL 18381.7 MEAN 50.4 MAX 6000 MIN 1.5 AC-FT 36460

e Estimated.

11044350 SANDIA CREEK NEAR FALLBROOK, CA

LOCATION.--Lat 33°25'03", long 117°14'47", SE 1/4 SE 1/4 sec.1, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank 0.4 mi north of intersection of Sandia and Rock Mountain Roads, 0.2 mi upstream of the confluence with Santa Margarita River, and 3.3 mi north of Fallbrook.

DRAINAGE AREA.--21.4 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 330 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s, Mar. 1, 1991, gage height, 8.74 ft; minimum daily, 0.15 ft³/s, Sept. 13, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0845	*2,100	*8.74	Mar. 27	0530	1,880	8.33
Mar. 20	1045	242	4.01				

Minimum daily, 0.68 ft³/s, Nov. 11.

REVISIONS.--The maximum discharge for the water year 1990 has been revised to 178 ft³/s, Feb. 17, 1990, gage height, 3.40 ft, superseding figures published in the report for 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	1.6	1.8	2.4	2.5	605	32	8.2	6.6	e2.5	2.3	1.3
2	1.4	1.6	1.7	2.4	2.5	47	28	8.3	7.3	1.9	2.2	1.2
3	1.5	1.2	1.7	2.8	2.7	31	24	8.1	6.2	1.9	1.9	1.2
4	1.3	1.1	1.7	4.4	2.5	21	22	7.7	6.1	1.9	1.8	1.3
5	1.0	1.2	1.9	3.5	2.6	18	20	7.3	6.3	1.7	1.8	1.6
6	.91	1.4	1.8	3.0	2.6	16	19	6.8	6.6	1.5	1.8	1.5
7	.78	1.8	1.7	2.8	2.4	14	18	5.5	6.7	1.3	1.8	1.2
8	.79	2.1	1.4	2.8	2.5	14	17	4.8	6.8	1.3	1.9	1.3
9	.83	1.2	1.5	4.0	2.1	13	17	4.4	e6.4	1.3	1.7	1.3
10	.86	1.1	1.7	4.1	2.2	12	16	5.1	e6.2	1.3	1.6	1.3
11	.84	.68	1.7	3.1	2.3	12	15	5.5	e6.0	1.4	1.5	1.3
12	1.0	.69	2.0	2.9	2.4	12	14	4.7	e5.9	1.3	1.4	1.6
13	.95	1.0	2.1	2.7	2.3	12	14	5.0	e5.8	1.1	1.4	1.6
14	.75	1.4	2.2	2.5	2.3	12	13	5.1	e5.6	1.2	1.7	1.4
15	.99	1.4	2.1	2.6	2.2	12	12	5.6	e5.4	1.4	1.7	1.3
16	1.2	1.5	2.2	2.7	1.9	12	12	5.9	e5.3	1.3	1.6	1.3
17	1.4	1.4	2.3	2.6	2.2	11	12	6.3	e5.1	1.6	1.3	1.2
18	1.5	1.4	2.2	2.5	2.1	10	12	6.8	e4.9	1.8	1.3	1.3
19	1.6	1.8	2.4	2.2	2.1	38	12	7.0	e4.7	1.6	1.4	1.3
20	1.4	5.3	2.5	2.2	2.1	80	11	7.8	e4.5	1.5	1.5	1.3
21	.77	2.3	2.5	2.5	2.0	55	11	7.8	e4.3	1.7	1.6	1.4
22	.95	2.3	2.6	2.5	1.9	27	11	8.4	e4.1	1.7	1.5	1.4
23	1.2	2.0	2.4	2.6	2.1	18	10	8.9	e4.0	1.6	1.4	1.0
24	1.1	1.5	2.6	2.6	1.9	16	10	9.0	e3.8	1.6	1.2	1.0
25	1.1	1.8	2.4	2.6	2.1	32	10	9.3	e3.6	1.6	1.3	1.1
26	1.1	2.0	2.4	2.5	2.2	50	9.9	9.2	e3.4	1.5	1.2	1.2
27	1.1	2.1	2.4	2.2	6.8	553	10	8.9	e3.2	1.6	1.3	1.2
28	1.3	2.1	2.5	2.2	84	119	9.4	8.1	e3.0	1.5	1.4	.95
29	1.3	1.9	2.5	2.6	---	60	8.4	7.9	e2.8	1.5	1.4	.93
30	1.3	1.9	2.3	2.6	---	43	8.1	7.5	e2.6	1.7	1.5	1.0
31	1.4	---	2.4	2.7	---	34	---	7.1	---	2.1	1.2	---
TOTAL	34.37	50.77	65.6	85.8	149.5	2009	437.8	218.0	153.2	48.9	48.6	37.98
MEAN	1.11	1.69	2.12	2.77	5.34	64.8	14.6	7.03	5.11	1.58	1.57	1.27
MAX	1.6	5.3	2.6	4.4	84	605	32	9.3	7.3	2.5	2.3	1.6
MIN	.75	.68	1.4	2.2	1.9	10	8.1	4.4	2.6	1.1	1.2	.93
AC-FT	68	101	130	170	297	3980	868	432	304	97	96	75

CAL YR 1990 TOTAL 981.68 MEAN 2.69 MAX 65 MIN .15 AC-FT 1950
WTR YR 1991 TOTAL 3339.52 MEAN 9.15 MAX 605 MIN .68 AC-FT 6620

e Estimated.

SANTA MARGARITA RIVER BASIN

165

11044900 DE LUZ CREEK NEAR FALLBROOK, CA

LOCATION.--Lat 33°22'12", long 117°19'15", NW 1/4 NE 1/4 sec.29, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank 0.65 mi upstream from mouth and 4.2 mi west of Fallbrook.

DRAINAGE AREA.--47.5 mi².

PERIOD OF RECORD.--February 1951 to September 1965, October 1989 to current year. Discharge measurements only, October 1990 to September 1991. Prior to December 1958, at site 750 ft upstream at same datum.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Indeterminate stage-discharge relation during 1991 water year. No regulation or diversion upstream from station. Discharge measurements are shown in the table below.

EXTREMES FOR PERIOD OF RECORD (PRIOR TO 1991).--Maximum discharge, 2,800 ft³/s, Apr. 1, 1958, gage height, 9.95 ft, site and datum then in use, from rating curve extended above 450 ft³/s; no flow for all or part of most years.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Time	Discharge	Date	Time	Discharge
Oct. 15	1330	0	Mar. 7	1230	8.54
Nov. 9	1330	0	Apr. 11	1400	12.9
Dec. 13	1300	0	May 17	1430	1.68
Jan. 15	1245	0	June 19	1430	0
Feb. 14	1245	0	Aug. 5	1400	0
Mar. 4	1400	17.0	Sept. 11	1500	0

11046000 SANTA MARGARITA RIVER AT YSIDORA, CA

LOCATION.--Lat 33°18'40", long 117°20'47", in NW 1/4 NW 1/4 sec.18, T.10 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank upstream side of Basilone Road Bridge, 7.9 mi upstream from mouth, and 5.2 mi upstream from Ysidora.

DRAINAGE AREA.--723 mi².

PERIOD OF RECORD.--February 1923 to current year. Low-flow records not equivalent prior to Dec. 10, 1980, due to installation of conservation ponds above downstream site.

REVISED RECORDS.--WDR CA-87-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 75 ft above National Geodetic Vertical Datum of 1929, from topographic map. February 1923 to Feb. 16, 1927 at site 4.4 mi downstream at different datum (destroyed by flood). Feb. 17, 1927, to Feb. 1, 1931, no gage in operation; records based on discharge measurements. Feb. 2, 1931, to Feb. 24, 1970 at site 5.4 mi downstream at different datum; Feb. 25, 1970, to Dec. 10, 1980 at site 6.2 mi downstream at different datum.

REMARKS.--Records poor. Flow partly regulated by Vail Lake (station 11042510) since November 1948. Diversions for irrigation on Rancho California (formerly Santa Margarita Ranch and Pauba Ranch).

AVERAGE DISCHARGE.--57 years (water years 1924-80, prior to installation of conservation ponds), 34.1 ft³/s, 24,710 acre-ft/yr; 11 years (water years 1981-91), 31.1 ft³/s, 22,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,600 ft³/s, Feb. 16, 1927, gage height, 18.00 ft, site and datum then in use, on basis of slope-area measurement of peak flow; maximum gage height, 18.80 ft, Feb. 18, 1980, site and datum then in use, possibly affected by tide; no flow for all or part of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,500 ft³/s, Mar. 1, gage height, 11.20 ft (from crest-stage gage); no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	14	3.5	5.3	e4760	126	18	8.2	5.8	3.1	2.2
2	.00	.00	13	3.5	5.3	1110	107	17	8.0	5.5	2.8	2.0
3	.00	.00	12	3.5	4.5	218	92	17	8.2	5.8	2.4	1.4
4	.00	.00	12	3.9	4.5	105	80	16	8.1	5.8	2.8	.52
5	.00	.00	11	3.9	4.2	71	70	16	7.5	5.2	2.9	.48
6	.00	.00	9.9	3.7	3.4	57	64	15	7.8	5.3	2.2	1.1
7	.00	.00	8.3	4.1	3.0	47	58	15	8.0	5.1	2.2	2.4
8	.00	.00	8.0	4.3	3.3	40	53	15	7.9	5.9	2.2	1.5
9	.00	.00	7.2	4.7	4.3	35	39	e15	7.9	4.4	1.9	1.6
10	.00	.00	6.5	4.9	4.5	32	25	e14	8.0	4.3	1.6	.09
11	.00	.00	5.7	4.3	3.6	30	24	e13	7.4	4.2	2.6	1.9
12	.00	.00	4.2	5.2	3.7	29	26	e13	7.9	4.3	3.0	2.3
13	.00	.00	3.1	5.9	4.3	28	28	e13	7.8	4.0	2.7	1.4
14	.00	.00	2.9	5.7	4.2	33	28	e12	7.4	4.9	2.8	3.1
15	.00	.00	3.3	5.6	3.8	30	28	e12	7.3	4.1	3.2	3.9
16	.00	.00	3.4	5.8	4.1	29	27	e13	7.4	3.2	3.1	3.6
17	.00	.00	3.5	5.5	4.1	28	27	e13	7.3	3.1	2.8	4.3
18	.00	.00	3.5	5.0	3.7	26	27	e13	7.0	2.7	2.9	4.5
19	.00	.00	3.5	5.0	2.9	202	26	12	7.0	3.3	2.3	4.9
20	.00	.00	3.4	5.3	3.6	920	25	11	6.8	2.7	2.0	5.0
21	.00	.00	3.6	5.5	3.9	750	24	11	6.6	2.9	1.5	4.0
22	.00	.00	3.6	5.5	2.4	187	24	9.9	6.8	2.6	1.5	4.8
23	.00	.00	3.6	5.0	2.8	113	24	10	6.9	2.2	1.5	4.4
24	.00	.00	3.6	5.0	3.5	78	22	9.4	6.4	2.5	1.5	2.7
25	.00	.00	3.6	4.6	3.8	121	21	9.8	6.5	3.3	2.5	3.5
26	.00	.00	3.8	4.5	3.7	333	21	9.5	6.4	3.1	2.0	3.8
27	.00	2.0	3.8	4.9	5.5	4240	21	9.1	6.7	2.9	1.2	3.7
28	.00	11	3.1	4.6	371	1070	20	8.5	6.4	3.7	.95	3.3
29	.00	16	3.1	4.6	---	359	20	8.8	6.3	3.9	.48	3.8
30	.00	14	3.2	4.5	---	229	19	8.6	6.8	3.7	.85	3.1
31	.00	---	3.4	5.0	---	171	---	8.5	---	3.2	1.8	---
TOTAL	0.00	43.00	176.8	147.0	476.9	15481	1196	386.1	218.7	123.6	67.28	85.29
MEAN	.000	1.43	5.70	4.74	17.0	499	39.9	12.5	7.29	3.99	2.17	2.84
MAX	.00	16	14	5.9	371	4760	126	18	8.2	5.9	3.2	5.0
MIN	.00	.00	2.9	3.5	2.4	26	19	8.5	6.3	2.2	.48	.09
AC-FT	.00	85	351	292	946	30710	2370	766	434	245	133	169

CAL YR 1990 TOTAL 1756.80 MEAN 4.81 MAX 272 MIN .00 AC-FT 3480
WTR YR 1991 TOTAL 18401.67 MEAN 50.4 MAX 4760 MIN .00 AC-FT 36500

e Estimated.

SANTA MARGARITA RIVER BASIN

167

11046050 SANTA MARGARITA RIVER AT MOUTH NEAR OCEANSIDE, CA

LOCATION.--Lat 33°14'08", long 117°24'27", in SW 1/4 NE 1/4 sec.9, T.11 S., R.8 W., San Diego County, Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank 300 ft downstream from bridge on Interstate Highway 5, 0.5 mi upstream from mouth, and 3.5 mi northwest of Oceanside.

DRAINAGE AREA.--744 mi².

PERIOD OF RECORD.--October 1989 to current year. Unpublished records for water year 1989 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 2.78 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily gage heights, which are poor. Gage height generally affected by tide. Flow partly regulated by Vail Lake (station 11042510) since November 1948. Diversions for irrigation on Rancho California (formerly Santa Margarita Ranch and Pauba Ranch).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 8.90 ft, Mar. 1, 1991; minimum daily, 3.87 ft, May 5, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.90 ft, Mar. 1; minimum daily, 3.87 ft, May 5.

EXTREMES FOR 1990 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum gage height, 8.31 ft, Feb. 22, 23; minimum daily, 4.87 ft, May 31.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
DAILY MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.34	5.37	5.71	5.89	6.64	5.47	6.20	6.96	4.90	5.46	5.31	5.15
2	5.33	5.38	5.72	5.94	6.66	5.44	6.22	6.95	4.98	5.45	5.30	5.14
3	5.32	5.38	5.74	5.95	6.67	5.33	6.22	6.95	5.04	5.44	5.29	5.14
4	5.32	5.39	5.76	5.95	6.70	5.28	6.27	6.93	5.09	5.43	5.28	5.13
5	5.31	5.39	5.78	5.95	6.75	5.28	6.33	6.92	5.18	5.42	5.27	5.12
6	5.31	5.40	5.78	5.95	6.79	5.29	6.35	6.91	5.31	5.41	5.26	5.11
7	5.31	5.40	5.79	5.97	6.81	5.33	6.37	6.89	5.39	5.40	5.26	5.10
8	5.31	5.40	5.79	5.98	6.84	5.35	6.39	6.87	5.46	5.39	5.26	5.10
9	5.30	5.41	5.79	6.01	6.86	5.52	6.41	6.86	5.49	5.39	5.25	5.09
10	5.30	5.42	5.80	6.02	6.88	5.65	6.42	6.84	5.55	5.38	5.24	5.09
11	5.30	5.43	5.80	6.02	6.90	5.71	6.42	6.83	5.59	5.38	5.24	5.08
12	5.30	5.43	5.80	6.04	6.90	5.74	6.43	6.81	5.61	5.38	5.24	5.07
13	5.30	5.43	5.80	6.04	6.90	5.76	6.43	6.79	5.62	5.38	5.23	5.07
14	5.29	5.43	5.81	6.10	6.87	5.79	6.45	6.78	5.62	5.40	5.23	5.07
15	5.29	5.44	5.82	6.09	6.87	5.81	6.47	6.76	5.56	5.40	5.25	5.06
16	5.29	5.44	5.83	6.13	6.87	5.84	6.49	6.74	5.41	5.40	5.25	5.06
17	5.29	5.45	5.82	6.29	6.93	5.86	6.60	6.46	5.41	5.40	5.25	5.05
18	5.30	5.47	5.82	6.36	7.11	5.87	6.68	5.50	5.42	5.40	5.25	5.05
19	5.30	5.48	5.83	6.40	7.66	5.89	6.69	5.22	5.42	5.41	5.24	5.04
20	5.30	5.49	5.83	6.42	8.14	5.91	6.70	5.21	5.45	5.42	5.24	5.04
21	5.30	5.51	5.84	6.45	8.26	5.92	6.72	5.26	5.47	5.42	5.23	5.04
22	5.32	5.52	5.84	6.46	8.30	5.94	6.72	5.50	5.49	5.42	5.22	5.03
23	5.34	5.54	5.84	6.47	7.73	5.97	6.72	5.84	5.51	5.41	5.22	5.05
24	5.35	5.56	5.84	6.49	5.32	5.99	6.76	6.23	5.51	5.41	5.21	5.05
25	5.35	5.59	5.85	6.50	5.34	6.02	6.90	6.47	5.51	5.39	5.21	5.05
26	5.36	5.65	5.86	6.50	5.38	6.04	6.95	6.35	5.51	5.38	5.20	5.04
27	5.36	5.69	5.85	6.51	5.29	6.07	6.98	5.75	5.49	5.37	5.18	5.04
28	5.37	5.70	5.86	6.52	5.42	6.12	6.98	5.53	5.48	5.36	5.18	5.04
29	5.37	5.71	5.87	6.52	---	6.17	6.98	5.31	5.48	5.35	5.18	5.03
30	5.37	5.71	5.88	6.52	---	6.18	6.97	5.02	5.47	5.34	5.17	5.03
31	5.37	---	5.90	6.61	---	6.20	---	4.87	---	5.32	5.16	---
MAX	5.37	5.71	5.90	6.61	8.30	6.20	6.98	6.96	5.62	5.46	5.31	5.15
MIN	5.29	5.37	5.71	5.89	5.29	5.28	6.20	4.87	4.90	5.32	5.16	5.03

WTR YR 1990 MAX 8.30 MIN 4.87

SANTA MARGARITA RIVER BASIN

11046050 SANTA MARGARITA RIVER AT MOUTH NEAR OCEANSIDE, CA--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.02	5.03	5.13	5.27	5.56	7.67	4.77	4.28	4.26	4.20	e4.20	3.98
2	5.02	5.02	5.13	5.27	5.57	6.37	4.66	4.16	4.21	4.11	e4.10	4.01
3	5.02	5.02	5.14	5.28	5.57	5.19	4.56	4.01	4.19	4.04	e4.10	4.08
4	5.02	5.02	5.14	5.33	5.57	e4.86	4.48	3.92	4.13	4.02	e4.25	4.29
5	5.02	5.02	5.14	5.35	5.58	e4.60	4.43	3.87	4.06	4.09	e4.50	4.47
6	5.02	5.03	5.15	5.36	5.59	e4.53	4.39	3.89	4.06	4.22	4.89	4.53
7	5.02	5.01	5.15	5.37	5.60	4.42	e4.32	3.94	4.14	4.40	4.90	4.57
8	5.03	5.01	5.15	5.37	5.60	e4.31	e4.26	3.94	4.31	4.57	4.96	4.59
9	5.03	5.01	5.15	5.40	5.60	e4.24	e4.22	4.18	4.51	4.70	5.02	4.53
10	5.02	5.02	5.15	5.45	5.61	e4.22	e4.31	4.26	4.65	4.74	4.97	4.36
11	5.01	5.01	5.15	5.47	5.62	e4.29	4.35	4.21	4.72	4.76	4.80	4.25
12	5.01	5.02	5.15	5.47	5.63	e4.34	4.25	4.31	4.69	4.74	4.70	4.20
13	5.01	5.02	5.15	5.48	5.63	e4.49	4.32	4.46	4.65	4.77	4.61	4.12
14	5.02	5.02	5.16	5.49	5.63	e4.61	4.42	4.47	4.57	4.73	4.42	4.07
15	5.02	5.02	5.16	5.49	5.63	e4.69	4.50	4.39	4.42	4.65	4.18	4.12
16	5.01	5.02	5.17	5.49	5.64	e4.52	4.45	4.29	4.33	4.51	4.05	4.21
17	5.01	5.03	5.17	5.50	5.64	e4.52	4.36	4.27	e4.26	4.37	4.02	4.33
18	5.01	5.03	5.17	5.50	5.64	e4.69	4.31	4.28	e4.15	e4.15	4.07	4.36
19	5.01	5.04	5.18	5.50	5.65	e4.71	4.23	4.19	e4.09	e4.05	4.09	4.36
20	5.02	5.10	5.20	5.51	5.65	5.07	4.17	4.18	4.15	e4.05	4.17	4.41
21	5.01	5.12	5.19	5.51	5.65	5.63	4.13	4.23	4.22	e4.15	4.24	4.52
22	5.00	5.13	5.20	5.52	5.65	4.92	4.15	4.19	4.30	e4.35	4.34	4.50
23	5.00	5.13	5.20	5.52	5.66	4.61	4.20	4.20	4.59	e4.55	4.51	4.57
24	5.00	5.13	5.21	5.52	5.66	4.48	4.20	4.34	4.65	e4.75	4.54	4.62
25	5.00	5.13	5.22	5.53	5.66	4.62	4.30	4.53	4.52	e4.85	4.52	4.67
26	5.00	5.14	5.24	5.53	5.66	5.06	4.34	4.56	4.45	e4.90	4.52	4.64
27	5.01	5.13	5.26	5.54	5.72	6.30	4.33	4.52	4.35	e4.90	4.47	4.60
28	5.01	5.13	5.27	5.54	6.10	6.19	4.28	4.46	4.25	e4.80	4.20	4.58
29	5.01	5.13	5.27	5.55	---	5.41	4.25	4.48	4.20	e4.70	4.00	4.54
30	5.01	5.13	5.26	5.55	---	5.08	4.24	4.49	4.19	e4.50	3.91	4.40
31	5.02	---	5.27	5.55	---	4.94	---	4.40	---	e4.40	3.92	---
MAX	5.03	5.14	5.27	5.55	6.10	7.67	4.77	4.56	4.72	4.90	5.02	4.67
MIN	5.00	5.01	5.13	5.27	5.56	4.22	4.13	3.87	4.06	4.02	3.91	3.98
CAL YR 1990	MAX 8.30	MIN 4.87										
WTR YR 1991	MAX 7.67	MIN 3.87										

e Estimated.

11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA

LOCATION.--Lat 33°30'09", long 117°38'50", in NW 1/4 SE 1/4 sec.6, T.8 S., R.8 W., Orange County, Hydrologic Unit 18070301, on right bank 20 ft downstream from La Novia Street bridge, 1.3 mi upstream from Arroyo Trabuco Creek, and 0.8 mi east of San Juan Capistrano.

DRAINAGE AREA.--109 mi².

WATER-DISCHARGE RECORDS

11046530

PERIOD OF RECORD.--October 1985 to current year. October 1985 to September 1986, published as San Juan Creek at San Juan Capistrano.

GAGE.--Water-stage recorder. Elevation of gage is 100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation upstream from station. Capistrano Water Co. diverts water 2.0 mi upstream. Various amounts of diverted water reach station as irrigation return flow.

AVERAGE DISCHARGE.--6 years, 3.18 ft³/s, 2,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,580 ft³/s, Mar. 1, 1991, gage height, 15.67 ft; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1969, reached a discharge of 22,400 ft³/s, at site 1.9 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1615	*2,580	*15.67	Mar. 27	0730	1,940	15.37

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.39	1.2	2.0	1.8	737	33	4.7	.93	.07	.00	.00
2	.00	.41	1.0	2.2	1.8	112	27	4.5	2.4	.00	.00	.00
3	.00	.33	.99	3.9	1.8	48	23	4.3	1.4	.00	.00	.00
4	.00	.26	.98	3.8	1.7	27	19	4.4	1.4	.00	.00	.00
5	.00	.34	1.1	3.2	1.6	18	16	4.2	1.3	.00	.00	.00
6	.00	.37	1.0	2.5	1.5	12	15	3.9	1.3	.00	.00	.00
7	.00	.43	1.3	2.2	1.5	7.9	13	3.8	1.2	.00	.00	.00
8	.00	.39	1.2	2.1	1.3	5.8	13	3.8	1.2	.00	.00	.00
9	.00	.38	1.0	3.1	1.3	4.7	11	3.6	1.3	.00	.00	.00
10	.00	.33	1.1	1.8	1.4	4.0	10	3.3	1.4	.00	.00	.00
11	.00	.35	1.1	1.3	1.5	4.0	7.6	2.9	1.2	.00	.00	.00
12	.00	.44	1.3	1.0	1.3	3.3	5.9	2.8	1.2	.00	.00	.00
13	.00	.55	1.4	.95	1.2	4.2	5.9	3.0	1.1	.00	.00	.00
14	.00	.61	1.2	.88	1.2	4.7	5.7	3.1	1.0	.00	.00	.00
15	.00	.62	1.1	.84	1.1	3.9	5.6	2.5	1.0	.00	.00	.00
16	.00	.73	1.0	1.2	1.1	3.2	5.6	1.8	1.1	.00	.00	.00
17	.00	.78	1.1	1.3	1.3	3.0	5.3	1.1	1.2	.00	.00	.00
18	.00	.86	1.2	1.3	1.5	5.1	4.8	.66	1.2	.00	.00	.00
19	.00	2.9	1.3	1.6	1.5	48	4.5	.53	1.1	.00	.00	.00
20	.00	2.6	2.5	1.7	1.7	86	4.5	.57	1.1	.00	.00	.00
21	.00	1.8	1.7	1.8	1.9	99	5.3	.53	.97	.00	.00	.00
22	.12	1.4	1.8	1.7	2.1	62	4.6	.69	.88	.00	.00	.00
23	.01	1.3	1.8	1.7	2.0	47	4.3	3.7	.84	.00	.00	.00
24	.01	1.5	2.0	1.7	2.2	38	3.9	2.6	.81	.00	.00	.00
25	.06	1.4	2.4	1.7	2.0	61	3.8	1.8	.66	.00	.00	.00
26	.12	2.0	2.1	1.7	2.0	79	3.7	1.6	.42	.00	.00	.00
27	.22	1.4	2.3	1.8	23	595	3.7	1.6	.31	.00	.00	.00
28	.34	1.2	2.2	1.8	104	110	3.7	1.4	.22	.00	.00	.00
29	.37	1.1	1.9	1.8	---	74	3.8	1.1	.24	.00	.00	.00
30	.47	1.0	1.9	1.8	---	54	4.5	1.0	.28	.00	.00	.00
31	.33	---	1.9	1.8	---	39	---	1.0	---	.00	.00	---
TOTAL	2.05	28.17	46.07	58.17	168.3	2399.8	276.7	76.48	30.66	0.07	0.00	0.00
MEAN	.066	.94	1.49	1.88	6.01	77.4	9.22	2.47	1.02	.002	.000	.000
MAX	.47	2.9	2.5	3.9	104	737	33	4.7	2.4	.07	.00	.00
MIN	.00	.26	.98	.84	1.1	3.0	3.7	.53	.22	.00	.00	.00
AC-FT	4.1	56	91	115	334	4760	549	152	61	.1	.00	.00

CAL YR 1990 TOTAL 333.18 MEAN .91 MAX 137 MIN .00 AC-FT 661
WTR YR 1991 TOTAL 3086.47 MEAN 8.46 MAX 737 MIN .00 AC-FT 6120

11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986 to current year (prior to 1986 published as 11046550 San Juan Creek at San Juan Capistrano).
 WATER TEMPERATURE: Water years 1986-88.
 SEDIMENT DATA: Water years 1986 to current year.

PERIOD OF DAILY RECORD.--
 WATER TEMPERATURE: October 1985 to September 1988.
 SUSPENDED-SEDIMENT DISCHARGE: October 1985 to September 1988.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDE (MG/L)	SEDI-DIS-CHARGE, SUS-PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	
NOV									
14...	1100	0.64	14.0	8	0.01	--	--	--	
20...	1045	2.0	16.0	15	0.08	--	--	--	
DEC									
19...	1200	1.1	11.0	6	0.02	--	--	--	
JAN									
04...	1030	8.3	13.5	12	0.27	--	--	--	
16...	1100	1.4	11.5	2	0.01	--	--	--	
FEB									
15...	1100	1.1	14.0	12	0.04	--	--	--	
28...	0920	83	14.5	1130	253	84	92	96	
MAR									
01...	1445	1360	15.0	1540	5650	55	58	62	
01...	1515	1400	15.0	1810	6840	--	--	--	
06...	1415	11	20.5	54	1.6	--	--	--	
20...	1130	74	14.0	990	198	83	84	91	
25...	1300	102	17.0	1060	292	76	87	92	
APR									
18...	1430	4.9	19.5	12	0.16	--	--	--	
JUN									
26...	1115	0.46	21.0	6	0.01	--	--	--	
DATE		SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
NOV									
14...	--	--	86	--	--	--	--	--	--
20...	--	--	79	--	--	--	--	--	--
DEC									
19...	--	--	50	--	--	--	--	--	--
JAN									
04...	--	--	100	--	--	--	--	--	--
16...	--	--	80	--	--	--	--	--	--
FEB									
15...	--	--	75	--	--	--	--	--	--
28...	98	99	100	--	--	--	--	--	--
MAR									
01...	74	81	86	89	93	98	100	--	--
01...	--	--	80	--	--	--	--	--	--
06...	--	--	93	95	100	--	--	--	--
20...	95	98	99	99	100	--	--	--	--
25...	98	99	99	100	--	--	--	--	--
APR									
18...	--	--	84	--	--	--	--	--	--
JUN									
26...	--	--	82	--	--	--	--	--	--

11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	NUMBER OF SAM-PLING POINTS (COUNT)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. .062 MM	BED MAT. SIEVE DIAM. .125 MM	BED MAT. SIEVE DIAM. .250 MM	BED MAT. SIEVE DIAM. .500 MM	BED MAT. SIEVE DIAM. 1.00 MM
JUN								
26...	1145	1	0.46	--	0	1	6	16
26...	1150	1	0.46	--	0	1	8	24
26...	1200	1	0.46	0	1	5	24	66
26...	1205	1	0.46	--	--	0	2	11

DATE	% FINER THAN 2.00 MM	% FINER THAN 4.00 MM	% FINER THAN 8.00 MM	% FINER THAN 16.0 MM	% FINER THAN 32.0 MM	% FINER THAN 64.0 MM	% FINER THAN 128 MM
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JUN							
26...	24	33	44	56	70	84	100
26...	37	46	58	77	100	--	--
26...	86	90	92	96	100	--	--
26...	22	32	49	75	100	--	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAM-PLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	START-ING TIME (2400 HOURS)	END-ING TIME (2400 HOURS)	NUMBER OF SAM-PLING POINTS (COUNT)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)
FEB										
28...	0950	1000	1130	0.250	0940	0955	23	1.00	74	14.5
28...	1000	1000	1130	0.250	0955	1010	23	1.00	74	14.5
MAR										
20...	1200	1000	1130	0.250	1150	1210	27	1.00	98	14.0
20...	1220	1000	1130	0.250	1210	1225	27	1.00	107	14.0
25...	1340	1000	1130	0.250	1335	1350	23	1.00	92	17.0
25...	1405	1000	1130	0.250	1400	1410	23	1.00	89	17.0

DATE	DIS-CHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. .250 MM	SED. BEDLOAD SIEVE DIAM. .500 MM	SED. BEDLOAD SIEVE DIAM. 1.00 MM	SED. BEDLOAD SIEVE DIAM. 2.00 MM	SED. BEDLOAD SIEVE DIAM. 4.00 MM	SED. BEDLOAD SIEVE DIAM. 8.00 MM	SED. BEDLOAD SIEVE DIAM. 16.0 MM	SED. BEDLOAD SIEVE DIAM. 32.0 MM
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FEB									
28...	3.9	1	34	68	84	94	100	--	--
28...	3.9	0	23	67	89	96	100	--	--
MAR									
20...	134	4	46	80	90	92	95	98	100
20...	134	5	48	83	91	94	96	99	100
25...	72	1	24	62	87	96	100	--	--
25...	72	1	19	62	88	96	98	99	100

11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	NUMBER OF SAM-PLING POINTS (COUNT)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JUN							
26...	1315	1	0.0	--	0	1	6
26...	1320	1	0.0	1	2	4	10
26...	1330	1	0.0	1	2	5	15
26...	1335	1	0.0	--	0	1	8

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
JUN							
26...	25	36	41	48	55	73	100
26...	14	17	22	38	69	91	100
26...	23	30	42	65	88	95	100
26...	32	55	75	90	99	100	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAM-PLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	START-ING TIME (2400 HOURS)	END-ING TIME (2400 HOURS)	NUMBER OF SAM-PLING POINTS (COUNT)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)
NOV										
20...	1220	1000	1130	0.250	1215	1225	15	1.00	13	18.0
20...	1230	1000	1130	0.250	1225	1240	15	1.00	12	18.0
JAN										
04...	1300	1000	1130	0.250	1250	1305	21	1.00	55	15.0
04...	1310	1000	1130	0.250	1305	1320	21	1.00	53	15.0
MAR										
06...	1620	1000	1130	0.250	1615	1625	13	1.00	12	19.0
06...	1635	1000	1130	0.250	1630	1640	13	1.00	14	19.0
25...	1610	1000	1130	0.250	1600	1615	17	1.00	55	17.0
25...	1630	1000	1130	0.250	1620	1635	17	1.00	58	17.0

DATE	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
NOV									
20...	8.8	1	19	58	84	96	100	--	--
20...	8.8	1	18	60	86	95	98	100	--
JAN									
04...	66	12	55	78	88	93	97	100	--
04...	66	4	28	57	76	89	96	99	100
MAR									
06...	26	1	15	51	78	91	98	100	--
06...	26	1	17	56	79	91	99	100	--
25...	310	1	15	52	75	90	98	100	--
25...	310	1	13	46	72	89	97	100	--

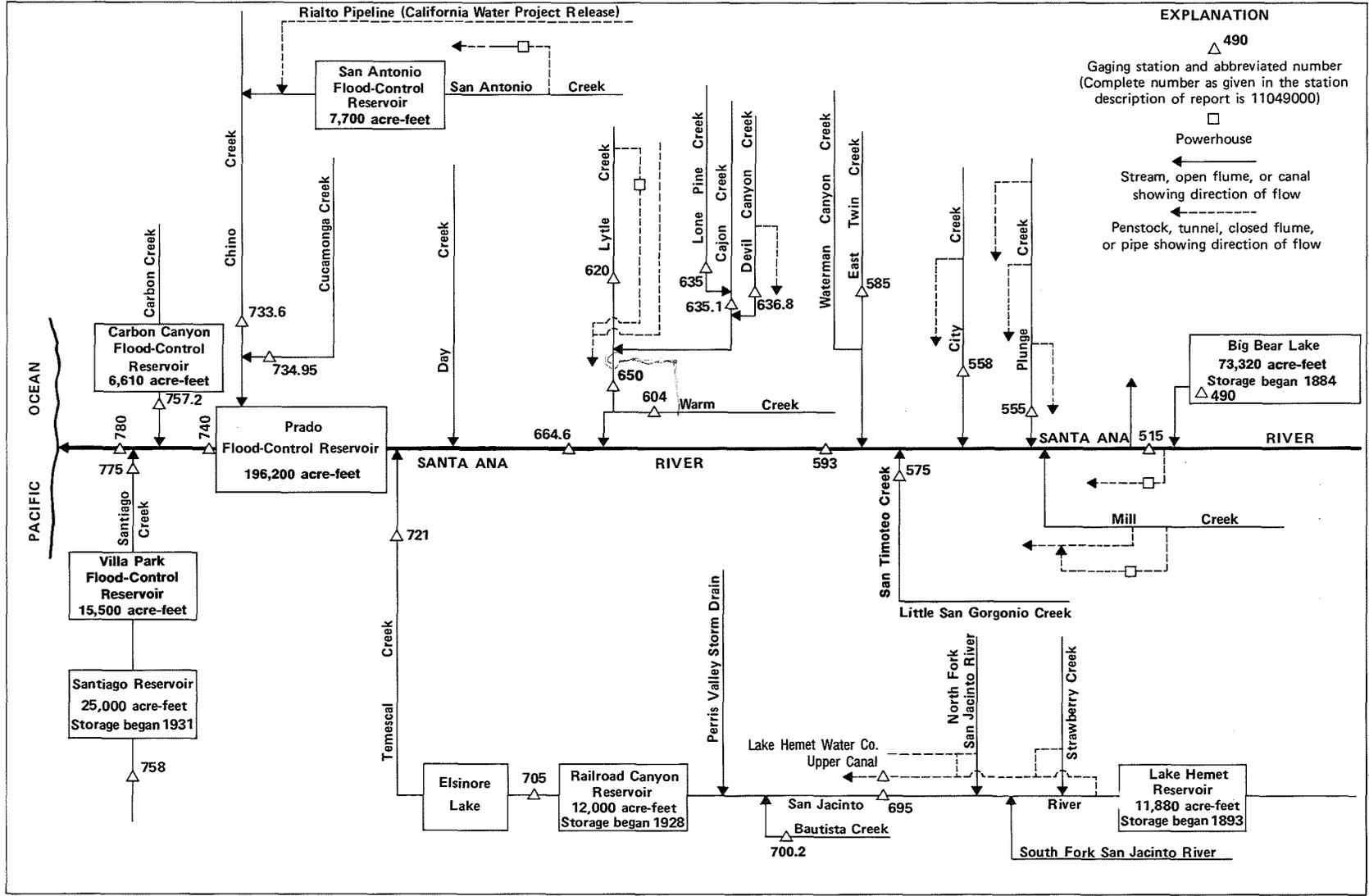


Figure 17. Diversions and storage in Santa Ana River basin.

11049000 BIG BEAR LAKE NEAR BIG BEAR LAKE, CA

LOCATION.--Lat 34°14'33", long 116°58'33", in SW 1/4 sec.22, T.2 N., R.1 W., San Bernardino County, Hydrologic Unit 18070203, at Big Bear Lake Dam on Bear Creek, 4 mi west of town of Big Bear Lake, and 7.5 mi upstream from mouth.

DRAINAGE AREA.--38.9 mi², excludes Baldwin Lake drainage included in reports prior to 1983.

PERIOD OF RECORD.--October 1950 to current year. February 1884 to September 1950 in files of Bear Valley Mutual Water Co.

REVISED RECORDS.--WDR CA-83-1: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 6,670.9 ft above National Geodetic Vertical Datum of 1929 (levels by Bear Valley Mutual Water Co.). Prior to 1912 at old dam 200 ft upstream at same datum; spillway at gage height, 52.4 ft.

REMARKS.--Lake is formed by multiple-arch concrete dam, completed in 1912, replacing existing lower dam built in 1884; storage began in spring of 1884. Capacity (based on July 1977 resurvey; present capacity table put into use August 1977), 73,320 acre-ft at elevation 6,743.3 ft, top of dam. No dead storage. There were no releases for irrigation. See schematic diagram of Santa Ana River basin.

COOPERATION.--Record of contents provided by Big Bear Municipal Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents unknown, lake spilled in 1969, 1970, 1980, 1983; minimum contents observed, 530 acre-ft, Nov. 24, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum contents unknown, lake spilled in 1916, 1917, 1922, 1923, 1938, 1939; lake dry October, November 1898, August to November 1899, October, November 1904.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 43,660 acre-ft, May 28; minimum contents observed, 35,690 acre-ft, Feb. 26.

MONTHEND CONTENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Contents (acre-feet)	Change in Contents (acre-feet)
Sept. 30.....	37,880	--
Oct. 31.....	36,890	-990
Nov. 30.....	36,010	-880
Dec. 31.....	35,800	-210
CAL YR 1990.....	--	-5,030
Jan. 31.....	36,010	+210
Feb. 28.....	35,690	-320
Mar. 31.....	38,780	3,090
Apr. 30.....	42,710	3,930
May 31.....	43,660	950
June 30.....	42,470	-1,190
July 31.....	41,180	-1,290
Aug. 31.....	40,480	-700
Sept. 30.....	39,460	-1,020
WTR YR 1991.....	--	1,580

SANTA ANA RIVER BASIN

11051500 SANTA ANA RIVER NEAR MENTONE, CA

LOCATION.--Lat 34°06'30", long 117°05'59", in SW 1/4 SW 1/4 sec.4, T.1 S., R.2 W., San Bernardino County, Hydrologic Unit 18070203, on right bank near mouth of canyon, 1.6 mi upstream from Mill Creek, 3.2 mi northeast of Mentone, and 16 mi downstream from Big Bear Lake.

DRAINAGE AREA.--210 mi², including area tributary to Baldwin Lake at head of Bear Valley.

PERIOD OF RECORD.--July 1896 to current year. Prior to October 1914, records for river only not equivalent owing to Greenspot pipeline diversion between sites and exclusion of discharge from Warm Springs Canyon. Monthly discharge only for January 1910, January and February 1916 published in WSP 1315-B.

REVISED RECORDS.--WSP 931: 1940. WSP 1635: 1918, 1920(M), 1922, 1937, 1943(M). WSP 1928: Drainage area. WSP 2128: 1910.

GAGE.--Three water-stage recorders. Main gage on right bank of river, canal gage on powerhouse diversion, and since 1970, supplementary gage on left bank of river. Elevation of the main and supplementary gages is 1,950 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 2, 1917, nonrecording gages at several sites within 1.5 mi upstream at various datums. Sept. 3, 1917, to May 27, 1969, water-stage recorder at site 0.2 mi upstream at different datum. Canal gage at different datum.

REMARKS.--Records fair. Flow partly regulated by Big Bear Lake (station 11049000). For records of combined discharge of Santa Ana River and Southern California Edison Co.'s canal below powerplant No. 2, which diverts upstream from station, see following page. Prior to Oct. 1, 1952, and since Apr. 26, 1976, Bear Valley Mutual Water Co. pumps water into channel above canal gage. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--River only: 77 years (water years 1915-91), 34.8 ft³/s, 25,210 acre-ft/yr.

Combined river and canal: 95 years, 81.0 ft³/s, 58,680 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 52,300 ft³/s, Mar. 2, 1938, gage height, 14.3 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow at times in some years.

Combined river and canal: Maximum discharge, 52,300 ft³/s, Mar. 2, 1938; minimum daily, 5.3 ft³/s,

July 22, 1990.

EXTREMES OUTSIDE PERIOD OF RECORD.--Combined river and canal: Flood of Feb. 23, 1891, 53,700 ft³/s, from notes provided by F.C. Finkle, consulting engineer, Los Angeles.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 810 ft³/s, Mar. 1, gage height, 8.53 ft; no flow for many days.

Combined river and canal: Maximum discharge, 811 ft³/s, Mar. 1; minimum daily, 7.0 ft³/s, Jan. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	7.2	464	59	3.0	.59	.16	.02	e.13
2	.00	.00	.00	.00	6.6	139	51	2.8	.65	.16	.01	e.12
3	.00	.00	.00	.00	7.0	41	74	2.7	.66	.16	.01	1.1
4	.00	.00	.00	6.2	6.6	42	79	2.8	.63	.16	.01	3.6
5	.00	.00	.00	26	4.5	45	33	2.5	.59	.16	.27	.42
6	.00	.00	.00	16	.00	33	74	2.4	.59	.15	.45	.45
7	.00	.00	.00	11	.00	22	57	2.5	.53	.13	.43	.42
8	.00	.00	.00	12	.00	4.1	46	e.30	.52	.13	.35	.18
9	.00	.00	.00	12	.00	2.7	31	e.29	.52	.13	.35	.11
10	.00	.00	.00	12	.00	1.5	24	e.29	.49	.12	.41	.09
11	.00	.00	.00	5.1	.00	1.6	e40	e.28	.45	.10	.35	.07
12	.00	.00	.00	.00	.00	1.3	e30	e.29	.45	.10	.39	.05
13	.00	.00	.00	.00	.00	19	e25	e.28	.45	.10	.30	.04
14	.00	.00	.00	.00	.00	16	e20	e.27	.42	.08	.31	.03
15	.00	.00	.00	.00	.00	4.4	e15	.27	.38	.08	.30	.03
16	.00	.00	.00	.00	.00	2.1	e10	.27	.38	.07	.33	.03
17	.00	.00	.00	.00	.00	10	e7.0	.32	.38	.06	.42	.02
18	.00	.00	.00	.00	.00	5.2	e7.0	.33	.38	.06	.46	.01
19	.00	.00	.00	.00	.00	31	e6.0	.33	.38	.06	.35	.01
20	.00	.00	.00	.00	.00	52	e6.0	.36	.38	.06	e.25	.01
21	.00	.00	.00	.00	.00	59	e6.0	.38	.38	.05	e.21	.01
22	.00	.00	.00	.00	.00	56	e5.0	.41	.33	.05	e.20	.01
23	.00	.00	.00	.00	.00	35	e5.0	.43	.33	.04	e.18	.02
24	.00	.00	.00	.00	.00	29	e5.0	.38	.28	.03	e.18	.00
25	.00	.00	.00	.00	.00	47	e4.0	.44	.23	.02	e.16	.00
26	.00	.00	.00	.00	.00	51	e4.0	.45	.23	.02	e.15	.01
27	.00	.00	.00	.00	.01	111	e4.0	.46	.23	.02	e.14	.01
28	.00	.00	.00	.00	127	64	e3.0	.52	.23	.01	e.15	.00
29	.00	.00	.00	.00	---	68	e3.0	.52	.20	.01	e.13	.00
30	.00	.00	.00	.00	---	74	3.0	.56	.18	.01	e.14	.00
31	.00	---	.00	5.0	---	70	---	.65	---	.02	e.14	---
TOTAL	0.00	0.00	0.00	105.30	158.91	1600.9	736.0	27.78	12.44	2.51	7.55	6.98
MEAN	.000	.000	.000	3.40	5.68	51.6	24.5	.90	.41	.081	.24	.23
MAX	.00	.00	.00	26	127	464	79	3.0	.66	.16	.46	3.6
MIN	.00	.00	.00	.00	.00	1.3	3.0	.27	.18	.01	.01	.00
AC-FT	.00	.00	.00	209	315	3180	1460	55	25	5.0	15	14

CAL YR 1990 TOTAL 141.36 MEAN .39 MAX 36 MIN .00 AC-FT 280
WTR YR 1991 TOTAL 2658.37 MEAN 7.28 MAX 464 MIN .00 AC-FT 5270

e Estimated.

11051501 SANTA ANA RIVER NEAR MENTONE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SANTA ANA RIVER AND SOUTHERN CALIFORNIA EDISON CO.'S CANAL NREAR MENTONE, CA. WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	14	16	9.4	464	129	68	41	27	20	e14
2	12	12	14	16	8.7	139	122	64	39	26	19	e15
3	11	12	14	20	9.2	41	153	63	38	25	18	11
4	10	12	14	7.0	8.7	42	167	61	38	24	18	11
5	9.8	12	15	32	12	45	127	59	39	24	18	17
6	10	12	15	30	14	33	121	60	38	23	18	17
7	11	12	15	23	14	86	122	61	37	24	17	20
8	10	12	15	28	14	44	122	e70	35	27	16	19
9	10	12	15	30	14	45	113	e69	34	24	16	18
10	10	12	15	30	14	44	110	e63	35	25	19	18
11	10	12	15	24	13	51	e122	e59	33	24	22	19
12	9.9	11	15	18	14	42	e102	e55	30	23	20	18
13	10	11	15	18	16	67	e98	e54	34	22	19	16
14	10	11	15	18	16	72	e93	e54	32	21	19	16
15	10	11	14	18	16	66	e91	52	36	21	18	16
16	10	12	15	17	16	58	e85	51	31	20	17	15
17	10	12	14	18	16	50	e78	52	31	20	17	15
18	10	12	15	18	16	50	e76	51	32	21	17	15
19	11	12	15	18	16	70	e73	49	32	21	16	15
20	11	15	15	18	16	95	e78	47	32	20	e16	16
21	10	14	14	19	16	104	e74	47	32	20	e15	17
22	11	13	12	17	16	116	e72	45	32	19	e15	19
23	11	13	12	17	16	105	e71	44	32	19	e15	19
24	10	13	13	17	16	94	e73	43	31	18	e15	16
25	10	13	14	17	16	112	e72	45	31	18	e15	15
26	10	14	14	17	15	116	e70	45	30	18	e15	17
27	10	13	14	17	18	166	e69	41	30	18	e15	21
28	10	14	14	17	127	137	e68	44	31	17	e15	18
29	11	14	15	17	---	149	e65	42	30	17	e15	18
30	11	14	15	9.2	---	140	66	44	28	18	e14	18
31	11	---	15	7.5	---	138	---	45	---	21	e14	---
TOTAL	321.7	374	446	588.7	513.0	2981	2882	1647	1004	665	523	499
MEAN	10.4	12.5	14.4	19.0	18.3	96.2	96.1	53.1	33.5	21.5	16.9	16.6
MAX	12	15	15	32	127	464	167	70	41	27	22	21
MIN	9.8	11	12	7.0	8.7	33	65	41	28	17	14	11
AC-FT	638	742	885	1170	1020	5910	5720	3270	1990	1320	1040	990
CAL YR 1990	TOTAL	6437.5	MEAN	17.6	MAX	65	MIN	5.3	AC-FT	12770		
WTR YR 1991	TOTAL	12444.4	MEAN	34.1	MAX	464	MIN	7.0	AC-FT	24680		

e Estimated.

11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA

LOCATION.--Lat 34°07'06", long 117°08'27", in NE 1/4 NE 1/4 sec.1, T.1 S., R.3 W., San Bernardino County, Hydrologic Unit 18070203, on left bank at mouth of canyon at crossing of North Fork ditch siphon, and 1.8 mi northeast of East Highlands.

DRAINAGE AREA.--16.9 mi².

PERIOD OF RECORD.--January 1919 to current year; combined records of creek and diversions, March 1951 to current year.

REVISED RECORDS.--WSP 1635: 1924, 1926, 1935-36(M), 1943, 1944(M), 1945, 1946(M), 1947, 1950(M).

WSP 1715: 1956-58(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder on creek. Since March 1951 water-stage recorder and weir on upper diversion; water-stage recorder and concrete-lined canal on middle diversion; crest-stage gage and sharp-crested weir on lower diversion. Elevation of creek gage is 1,590 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1969, creek gage at datum 4.00 ft higher. Diversions all at different datums.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Diversion from Alder Creek to Upper Plunge Creek area was active 1904-67. Diversions for irrigation are made at sites 0.5, 1.0, and 2.5 mi upstream from station. Water has been diverted upstream from station for irrigation during entire period of record. Combined discharge of Plunge Creek and upper, middle, and lower diversions is given on following page. No flow in lower diversion since May 29, 1966. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--Creek only: 72 years, 6.56 ft³/s, 4,750 acre-ft/yr.

Combined creek and diversions: 40 years, 8.32 ft³/s, 6,030 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 5,340 ft³/s, Mar. 2, 1938, on basis of slope-area measurement of peak flow; no flow at times in some years.

Combined creek and diversions: Maximum discharge, 4,770 ft³/s, Dec. 6, 1966; no flow Nov. 12, 1964,

Sept. 29, 1965, Aug. 4, 1987, several days in November 1988, September 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Creek only Discharge (ft ³ /s)	Gage height (ft)	Combined creek and diversions Discharge (ft ³ /s)
Mar. 1	0715	*477	*4.57	*477

Creek only: No flow for many days.

Combined creek and diversions: No flow Sept. 14-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.24	.68	182	32	6.7	1.9	.00	.00	.00
2	.00	.00	.00	.24	.66	e50	25	5.7	2.0	.00	.00	.00
3	.00	.00	.00	1.1	.66	e20	27	5.0	1.8	.00	.00	.00
4	.00	.00	.00	5.3	.66	e10	30	4.2	1.2	.00	.00	.00
5	.00	.00	.00	7.1	.67	e12	31	3.8	.27	.00	.00	.00
6	.00	.00	.00	2.6	.75	e9.0	31	3.5	.01	.00	.00	.00
7	.00	.00	.00	2.0	.47	e7.0	28	3.2	.01	.00	.00	.00
8	.00	.00	.00	1.8	.09	e6.0	24	3.2	.01	.00	.00	.00
9	.00	.00	.00	2.0	.09	e5.0	22	4.5	.02	.00	.00	.00
10	.00	.00	.00	1.9	.09	e5.0	20	5.2	.02	.00	.00	.00
11	.00	.00	.00	1.8	.09	e7.0	19	5.1	.02	.00	.00	.00
12	.00	.00	.00	1.8	.10	e5.0	16	5.0	.01	.00	.00	.00
13	.00	.00	.00	1.8	.13	e10	14	4.8	.00	.00	.00	.00
14	.00	.00	.00	1.8	.13	20	14	4.7	.00	.00	.00	.00
15	.00	.00	.31	1.8	.14	13	14	3.5	.00	.00	.00	.00
16	.00	.00	.30	1.7	.18	e11	12	2.3	.00	.00	.00	.00
17	.00	.00	.16	1.7	.31	e10	12	4.0	.00	.00	.00	.00
18	.00	.00	.13	1.6	.68	e10	11	4.0	.00	.00	.00	.00
19	.00	.00	.13	1.6	.39	22	10	3.9	.00	.00	.00	.00
20	.00	.00	.13	1.6	.05	40	9.9	2.9	.00	.00	.00	.00
21	.00	.00	.13	1.6	.05	41	9.6	1.0	.00	.00	.00	.00
22	.00	.00	.13	1.6	.05	29	8.9	.66	.00	.00	.00	.00
23	.00	.00	.15	1.6	.05	24	e7.5	.39	.00	.00	.00	.00
24	.00	.00	.24	1.6	.04	21	e7.0	.28	.00	.01	.00	.00
25	.00	.00	.26	1.6	.04	25	e6.8	.22	.00	.00	.00	.00
26	.00	.00	.28	1.6	.03	24	6.5	.42	.00	.00	.00	.00
27	.00	.00	.26	1.6	.24	86	4.3	.27	.00	.00	.00	.00
28	.00	.00	.24	1.6	54	58	3.3	.10	.00	.00	.00	.00
29	.00	.00	.24	1.6	---	45	5.0	.05	.00	.00	.00	.00
30	.00	.00	.24	1.5	---	39	6.6	.91	.00	.00	.00	.00
31	.00	---	.24	.79	---	34	---	1.9	---	.00	.00	---
TOTAL	0.00	0.00	3.57	58.17	61.52	880.0	467.4	91.40	7.27	0.01	0.00	0.00
MEAN	.000	.000	.12	1.88	2.20	28.4	15.6	2.95	.24	.000	.000	.000
MAX	.00	.00	.31	7.1	54	182	32	6.7	2.0	.01	.00	.00
MIN	.00	.00	.00	.24	.03	5.0	3.3	.05	.00	.00	.00	.00
AC-FT	.00	.00	7.1	115	122	1750	927	181	14	.02	.00	.00

CAL YR 1990 TOTAL 558.09 MEAN 1.53 MAX 89 MIN .00 AC-FT 1110
WTR YR 1991 TOTAL 1569.34 MEAN 4.30 MAX 182 MIN .00 AC-FT 3110

e Estimated.

11055501 PLUNGE CREEK NEAR EAST HIGHLANDS, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF PLUNGE CREEK AND
DIVERSIONS NEAR EAST HIGHLANDS, CA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	.67	.93	1.2	1.4	183	e32	e8.1	e3.4	e.75	e.30	e.19
2	.43	.62	.91	1.2	1.4	e50	e25	e7.1	e3.4	e.72	e.30	e.19
3	.43	.56	.89	1.6	1.4	e20	e27	e6.3	e3.2	e.64	e.30	e.16
4	.49	.51	.91	5.3	1.4	e10	e30	e5.5	e2.4	e.63	e.28	e.16
5	.54	.54	.92	7.1	1.5	e12	e31	e5.0	e2.0	e.62	e.28	e.15
6	.55	.61	.93	2.6	1.6	e9.0	e31	e4.7	e2.3	e.60	e.28	e.14
7	.60	.71	.94	2.0	1.7	e7.0	e28	e4.4	e2.2	e.57	e.26	e.14
8	e.70	.64	.95	1.8	1.6	e6.0	e24	e4.4	e1.9	e.58	e.26	e.12
9	.47	.63	.90	2.0	1.6	e5.0	e22	e5.0	e1.7	e.55	e.26	e.12
10	.46	.62	.91	1.9	1.6	e5.0	e20	e5.2	e1.5	e.54	e.26	e.12
11	.48	1.5	.58	1.8	1.6	e7.0	e19	e5.1	e1.2	e.54	e.26	e.10
12	.55	1.1	.44	1.8	1.7	e5.0	e16	e5.0	e1.2	e.53	e.24	e.10
13	.54	.65	.82	1.8	1.7	e10	e14	e4.8	e1.1	e.51	e.24	e.08
14	.54	.66	.44	1.8	1.6	20	e14	e4.7	e1.2	e.51	e.24	.00
15	.53	.69	.91	1.8	1.6	13	e14	e4.3	e1.2	e.50	e.24	.00
16	.54	.72	1.1	1.7	1.7	e11	e12	e3.1	e1.1	e.49	e.23	.00
17	.52	.76	.94	1.7	1.6	e10	e12	e5.4	e.97	e.48	e.23	.00
18	.40	.76	.98	1.6	1.7	e10	e11	e5.4	e.94	e.48	e.23	.00
19	.59	.72	.97	1.6	1.7	22	e10	e5.3	e1.0	e.47	e.22	.00
20	.59	.61	.96	1.6	1.7	40	e9.9	e4.1	e1.0	e.46	e.22	.00
21	.55	.88	.95	1.6	1.8	41	e9.6	e3.6	e.95	e.45	e.21	.00
22	.54	.84	.93	1.6	1.7	29	e8.9	e3.0	e.94	e.47	e.21	.00
23	.53	.77	.96	1.6	1.8	24	e7.5	e2.6	e.92	e.45	e.21	.00
24	.52	.83	1.0	1.6	1.7	21	e7.0	e2.3	e.92	e.45	e.21	.00
25	.51	.84	1.1	1.6	1.6	25	e6.8	e2.2	e.88	e.40	e.20	.00
26	.59	1.0	1.1	1.6	1.6	24	e7.0	e2.2	e.89	e.40	e.20	.00
27	.57	.99	1.1	1.6	2.0	86	e5.3	e2.5	e.93	e.38	e.20	.00
28	.54	.93	1.1	1.6	54	58	e4.5	e2.4	e.97	e.38	e.20	.00
29	.98	.83	1.2	1.6	---	45	e6.4	e2.2	e.89	e.35	e.20	.00
30	2.4	.94	1.2	1.9	---	39	e7.7	e2.2	e.85	e.35	e.20	.00
31	1.2	---	1.2	1.6	---	34	---	e3.4	---	e.30	e.19	---
TOTAL	19.37	23.13	29.17	61.8	98.0	881.0	472.6	131.5	44.05	15.55	7.36	1.77
MEAN	.62	.77	.94	1.99	3.50	28.4	15.8	4.24	1.47	.50	.24	.059
MAX	2.4	1.5	1.2	7.1	54	183	32	8.1	3.4	.75	.30	.19
MIN	.40	.51	.44	1.2	1.4	5.0	4.5	2.2	.85	.30	.19	.00
AC-FT	38	46	58	123	194	1750	937	261	87	31	15	3.5

CAL YR 1990 TOTAL 890.22 MEAN 2.44 MAX 89 MIN .21 AC-FT 1770
WTR YR 1991 TOTAL 1785.30 MEAN 4.89 MAX 183 MIN .00 AC-FT 3540

e Estimated.

11055800 CITY CREEK NEAR HIGHLAND, CA

LOCATION.--Lat 34°08'38", long 117°11'16", in SW 1/4 NW 1/4 sec.27, T.1 N., R.3 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 0.6 mi upstream from Highland Avenue and 1.5 mi northeast of Highland. DRAINAGE AREA.--19.6 mi².

PERIOD OF RECORD.--October 1919 to current year; combined records of creek and City Creek Water Co.'s canal, June 1924 to September 1986, October 1988 to current year.

REVISED RECORDS.--WSP 1635: 1920(M), 1923(M), 1937(M), 1939(M), 1946. WSP 1928: Drainage area.

GAGE.--Water-stage recorder on creek; water-stage recorder on canal. Elevation of creek gage is 1,580 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 1, 1939, at site 0.2 mi downstream at different datum. Canal gage at different datum.

REMARKS.--Records fair. No regulation upstream from station. City Creek Water Co.'s canal diverted from a site 0.5 mi upstream from station for irrigation throughout period of record until Sept. 30, 1986, and resumed diversion on Mar. 31, 1989. See schematic diagram of Santa Ana River basin. Combined discharge of City Creek and canal is given on following page.

AVERAGE DISCHARGE.--Creek only: 72 years, 9.35 ft³/s, 6,770 acre-ft/yr. Combined creek and canal: 65 years (water years 1925-86, 1989-91), 11.0 ft³/s, 7,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 7,000 ft³/s, Feb. 25, 1969, gage height, 9.39 ft, from rating curve extended above 580 ft³/s on basis of slope-area measurement at gage height 8.82 ft; no flow for many days in some years.

Combined creek and canal: Maximum discharge, 7,000 ft³/s, Feb. 25, 1969; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Creek only		Combined creek and canal	
		Discharge (ft ³ /s)	Gage height (ft)	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0800	*460	*5.80	*460	
Mar. 27	0230	297	5.35	297	

Creek only: Minimum daily, 0.06 ft³/s, Sept. 2-4.

Combined creek and canal: Minimum daily, 0.06 ft³/s, Sept. 2-4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.16	.16	.58	.14	e.24	209	43	6.0	3.3	1.3	.32	.13
2	e.16	.16	.54	.14	e.24	57	35	6.0	3.0	1.2	.20	.06
3	.17	.15	.53	.23	e.25	25	34	5.9	2.7	1.1	.18	.06
4	.12	.15	.57	2.0	e.25	16	34	5.4	2.4	1.0	.17	.06
5	.11	.16	.74	3.9	e.25	15	34	4.9	2.4	.94	.18	.09
6	.12	.17	.65	.23	e.26	11	33	4.7	2.3	.86	.22	.11
7	.14	.18	.63	.16	.26	9.4	29	4.3	2.1	.88	.22	.09
8	.13	.20	.67	.15	.26	8.4	25	4.3	2.1	1.0	.15	.09
9	.11	.18	.67	.15	.26	7.6	22	4.7	2.0	.86	.13	.11
10	.10	.15	.65	e.16	.26	6.9	20	4.5	1.9	.66	.12	.11
11	.11	.14	.66	e.16	.29	8.8	18	4.4	1.9	.42	.11	.11
12	.11	.14	.64	e.16	.27	7.0	18	4.1	1.8	.30	.12	.12
13	.11	.15	.75	e.17	.26	14	14	4.0	1.9	.21	.11	.14
14	.13	.16	.75	e.17	.26	20	13	3.9	2.0	.19	.11	.14
15	.15	.19	.75	e.17	.26	17	13	3.7	2.1	.17	.13	.13
16	.16	.22	.75	e.17	.26	14	12	3.5	1.8	.16	.13	.12
17	.15	.29	.74	e.18	.26	12	11	3.7	1.6	.21	.13	.11
18	.15	.28	.72	e.18	.26	11	11	3.7	1.6	.34	.12	.11
19	.18	.35	.75	e.19	.26	37	10	3.7	1.8	.47	.12	.12
20	.16	1.4	.77	e.19	.23	49	9.5	3.5	1.7	.47	.12	.13
21	.14	.79	.76	e.20	.20	42	9.4	3.7	1.7	.42	.10	.14
22	.13	.50	.77	e.20	.20	34	9.2	3.6	1.7	.34	.09	.16
23	.13	.42	.73	e.21	.20	33	8.7	3.2	1.7	.29	.09	.16
24	.12	.40	.74	e.21	.20	31	8.3	2.9	1.8	.25	.10	.13
25	.12	.41	.68	e.21	.20	38	8.3	2.8	1.9	.26	.10	.11
26	.12	.77	.68	e.22	.20	38	7.8	2.8	1.8	.28	.10	.11
27	.12	.79	.50	e.22	2.5	124	7.0	3.1	2.0	.24	.12	.13
28	.11	.65	.14	e.22	84	70	6.6	3.1	2.0	.19	.13	.13
29	.12	.59	.14	e.23	---	61	6.4	2.9	2.0	.15	.12	.13
30	.12	.58	.14	e.23	---	50	6.0	3.3	1.7	.16	.13	.12
31	.13	---	.14	e.24	---	45	---	3.8	---	.25	.12	---
TOTAL	4.09	10.88	18.93	11.39	92.84	1121.1	514.2	124.1	60.7	15.57	4.29	3.46
MEAN	.13	.36	.61	.37	3.32	36.2	17.1	4.00	2.02	.50	.14	.12
MAX	.18	1.4	.77	3.9	84	209	43	6.0	3.3	1.3	.32	.16
MIN	.10	.14	.14	.14	.20	6.9	6.0	2.8	1.6	.15	.09	.06
AC-FT	8.1	22	38	23	184	2220	1020	246	120	31	8.5	6.9

CAL YR 1990 TOTAL 503.95 MEAN 1.38 MAX 55 MIN .03 AC-FT 1000
WTR YR 1991 TOTAL 1981.55 MEAN 5.43 MAX 209 MIN .06 AC-FT 3930

e Estimated.

11055801 CITY CREEK NEAR HIGHLAND, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF CITY CREEK AND CITY CREEK
WATER CO.'S CANAL NEAR HIGHLAND, CA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.16	.16	.58	.73	e2.7	209	43	6.0	3.3	1.3	.32	.13
2	e.16	.16	.54	.67	e2.6	57	35	6.0	3.0	1.2	.20	.06
3	.17	.15	.53	2.3	e2.7	25	34	5.9	2.7	1.1	.18	.06
4	.12	.15	.57	6.8	e2.6	16	34	5.4	2.4	1.0	.17	.06
5	.11	.16	.74	9.4	e2.4	15	34	4.9	2.4	.94	.18	.09
6	.12	.17	.65	4.0	e2.9	11	33	4.7	2.3	.86	.22	.11
7	.14	.18	.63	2.6	2.7	9.4	29	4.3	2.1	.88	.22	.09
8	.13	.20	.67	1.9	2.5	8.4	25	4.3	2.1	1.0	.15	.09
9	.11	.18	.67	2.1	2.5	7.6	22	4.7	2.0	.86	.13	.11
10	.10	.15	.65	e2.6	2.5	6.9	20	4.5	1.9	.66	.12	.11
11	.11	.14	.66	e3.1	2.4	8.8	18	4.4	1.9	.42	.11	.11
12	.11	.14	.64	e3.0	2.3	7.0	16	4.1	1.8	.30	.12	.12
13	.11	.15	.75	e3.1	2.3	14	14	4.0	1.9	.21	.11	.14
14	.13	.16	.75	e3.1	2.2	20	13	3.9	2.0	.19	.11	.14
15	.15	.19	.75	e3.4	2.0	17	13	3.7	2.1	.17	.13	.13
16	.16	.22	.75	e3.9	2.0	14	12	3.5	1.8	.16	.13	.12
17	.15	.29	.74	e4.2	2.2	12	11	3.7	1.6	.21	.13	.11
18	.15	.28	.72	e4.2	2.1	11	11	3.7	1.6	.34	.12	.11
19	.18	.35	.75	e4.1	2.0	37	10	3.7	1.8	.47	.12	.12
20	.16	1.4	.77	e4.1	1.8	49	9.5	3.5	1.7	.47	.12	.13
21	.14	.79	.76	e4.4	1.7	42	9.4	3.7	1.7	.42	.10	.14
22	.13	.50	.77	e4.1	1.7	34	9.2	3.6	1.7	.34	.09	.16
23	.13	.42	.73	e3.9	1.6	33	8.7	3.2	1.7	.29	.09	.16
24	.12	.40	.74	e3.9	1.7	31	8.3	2.9	1.8	.25	.10	.13
25	.12	.41	.68	e3.8	1.6	38	8.3	2.8	1.9	.26	.10	.11
26	.12	.77	.68	e3.7	1.6	38	7.8	2.8	1.8	.28	.10	.11
27	.12	.79	.74	e3.6	4.6	124	7.0	3.1	2.0	.24	.12	.13
28	.11	.65	.67	e3.6	84	70	6.6	3.1	2.0	.19	.13	.13
29	.12	.59	.64	e3.5	---	61	6.4	2.9	2.0	.15	.12	.13
30	.12	.58	.63	e3.4	---	50	6.0	3.3	1.7	.16	.13	.12
31	.13	---	.73	e2.9	---	45	---	3.8	---	.25	.12	---
TOTAL	4.09	10.88	21.28	110.10	145.9	1121.1	514.2	124.1	60.7	15.57	4.29	3.46
MEAN	.13	.36	.69	3.55	5.21	36.2	17.1	4.00	2.02	.50	.14	.12
MAX	.18	1.4	.77	9.4	84	209	43	6.0	3.3	1.3	.32	.16
MIN	.10	.14	.53	.67	1.6	6.9	6.0	2.8	1.6	.15	.09	.06
AC-FT	8.1	22	42	218	289	2220	1020	246	120	31	8.5	6.9

CAL YR 1990 TOTAL 737.93 MEAN 2.02 MAX 61 MIN .03 AC-FT 1460
WTR YR 1991 TOTAL 2135.67 MEAN 5.85 MAX 209 MIN .06 AC-FT 4240

e Estimated.

11057500 SAN TIMOTEO CREEK NEAR LOMA LINDA, CA

LOCATION.--Lat 34°03'46", long 117°16'16", in NE 1/4 NW 1/4 sec.26, T.1 S., R.4 W., San Bernardino County, Hydrologic Unit 18070203, on left bank 200 ft upstream from Redlands Boulevard bridge and 0.6 mi northwest of Loma Linda.

DRAINAGE AREA.--125 mi².

PERIOD OF RECORD.--October 1954 to September 1965, February 1968 to October 1973, April 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,030 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to April 1979, water-stage recorders at site 0.2 mi downstream at different datum.

REMARKS.--Records poor. No regulation upstream from station. Natural flow affected by pumping and return flow from irrigated areas. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--28 years (1955-65, 1969-73, 1980-91), 2.78 ft³/s, 2,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s, Feb. 25, 1969, gage height, 8.2 ft, from floodmark, from rating curve extended above 2,100 ft³/s on basis of slope-conveyance study of peak flow, at site and datum then in use; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 4	2045	550	4.15	Mar. 20	1000	752	4.42
Mar. 1	1115	1,390	5.07	Mar. 27	0200	*1,870	*5.44

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.1	.65	1.8	.71	e787	.00	2.3	2.8	2.0	2.9	.00
2	.85	1.3	.95	1.6	.77	e19	.01	1.8	1.5	1.2	2.3	.00
3	.41	1.3	.63	24	.86	.49	.00	1.3	1.6	.31	1.7	.02
4	.46	.73	.58	66	.81	2.6	.00	.79	1.8	.00	.41	.01
5	.48	.35	1.2	21	.45	2.2	.00	.16	2.3	.00	.00	.00
6	.00	.26	.87	.30	.11	.19	.08	.71	2.2	.00	.04	.00
7	.00	.05	.14	.27	.04	.05	.18	.42	1.4	.00	.00	.00
8	.00	.73	.31	.17	.00	.00	.08	.85	1.2	.00	.00	.00
9	.65	.72	.23	8.4	.00	.00	.69	2.3	.54	.00	.00	.14
10	.41	.10	.20	.17	.00	.00	1.9	1.8	1.6	.00	.00	.00
11	.66	.08	.22	.06	.00	1.1	1.2	1.1	3.3	.00	.00	.00
12	.67	.52	.99	.00	.08	.00	.84	.65	2.2	.80	.36	.00
13	.92	.82	1.6	.00	1.0	9.4	.69	1.7	1.6	1.8	.95	.08
14	.37	.39	1.0	.00	.38	1.5	.49	2.7	1.3	1.3	.04	.13
15	.08	.05	.19	.00	.18	.63	1.6	2.7	4.0	.15	.02	.50
16	.04	.00	.30	.00	.31	.10	1.3	1.3	2.0	.00	.00	.05
17	.00	.08	.62	.00	.10	.00	1.0	.93	1.1	.00	.00	.00
18	.00	.29	.30	.00	.12	.00	1.3	1.1	.67	.00	.00	.00
19	.00	.18	.43	.00	.00	48	1.7	1.2	.88	.00	.00	.00
20	.21	2.8	.82	.00	.21	e200	1.9	1.6	.60	.00	.00	.00
21	2.3	1.1	1.2	.00	.02	e10	2.0	2.0	1.3	.00	.00	.00
22	.54	2.1	1.2	.00	.10	e1.0	2.2	2.1	.96	.04	.00	.00
23	2.2	2.3	1.9	.00	.36	.46	2.4	1.8	.42	.00	.00	.11
24	1.1	1.2	1.6	.00	.00	.37	2.2	1.3	.00	.00	.00	.00
25	1.0	.45	1.4	.00	.00	43	2.0	1.2	.00	.00	.02	.02
26	.33	1.1	2.1	.00	.00	76	2.1	3.4	.55	.03	.00	.23
27	.03	1.3	2.5	.00	83	e450	2.5	8.2	1.7	.85	.00	.28
28	.66	1.4	2.4	.00	498	e10	2.2	11	.46	.61	.09	.27
29	2.4	1.2	1.9	.00	---	.10	2.3	5.6	1.8	.84	.24	.02
30	3.3	.64	1.5	.64	---	.00	1.5	4.7	1.8	1.2	.19	.00
31	1.7	---	1.9	.79	---	.00	---	2.0	---	2.5	.00	---
TOTAL	23.07	24.64	31.83	125.20	587.61	1663.19	36.36	70.71	43.58	13.63	9.26	1.86
MEAN	.74	.82	1.03	4.04	21.0	53.7	1.21	2.28	1.45	.44	.30	.062
MAX	3.3	2.8	2.5	.66	498	787	2.5	11	4.0	2.5	2.9	.50
MIN	.00	.00	.14	.00	.00	.00	.00	.16	.00	.00	.00	.00
AC-FT	46	49	63	248	1170	3300	72	140	86	27	18	3.7

CAL YR 1990 TOTAL 332.45 MEAN .91 MAX 62 MIN .00 AC-FT 659
WTR YR 1991 TOTAL 2630.94 MEAN 7.21 MAX 787 MIN .00 AC-FT 5220

e Estimated.

11058500 EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CA

LOCATION.--Lat 34°10'45", long 117°15'53", in NE 1/4 NE 1/4 sec.14, T.1 N., R.4 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 1,000 ft upstream from Del Rosa Water Co.'s diversion, 0.5 mi south of Arrowhead Springs, and 1.0 mi downstream from Strawberry Creek.

DRAINAGE AREA.--8.80 mi².

PERIOD OF RECORD.--December 1919 to current year. Prior to October 1952, published as Strawberry Creek near Arrowhead Springs.

REVISED RECORDS.--WSP 1635: 1924(M), 1927, 1928(M), 1929, 1932(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,590 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. One small diversion for domestic use upstream from station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--71 years (water years 1921-91), 4.86 ft³/s, 3,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,710 ft³/s, Jan. 29, 1980, gage height, 8.35 ft, on basis of slope-area measurement of peak flow; no flow at times in 1929, 1931-35.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*), from rating curve extended above 120 ft³/s on basis of slope-area measurement at gage height 8.35 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1100	*646	*4.82	Mar. 27	0200	217	3.67

Minimum daily, 0.37 ft³/s, Aug. 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	.70	.52	.88	1.1	380	27	e2.9	1.4	.75	.57	e.44
2	.65	.71	.60	.92	1.1	479	27	e2.8	1.5	.72	.51	e.44
3	.61	.70	.57	2.2	1.2	472	27	e2.7	1.1	.73	.51	e.44
4	.59	.67	.58	5.5	1.0	426	26	e2.4	.78	.76	.51	e.45
5	.59	.68	.63	4.6	1.0	251	e25	e2.2	.58	.73	.51	e.45
6	.65	.69	.67	1.8	1.2	125	e23	e2.1	.41	.65	.46	e.47
7	.71	.75	1.5	1.4	.98	100	e20	e2.1	.54	.64	.44	e.47
8	.57	.80	.64	1.3	1.0	80	e17	e2.1	.97	.70	.40	e.47
9	.56	.76	.98	1.4	1.1	59	e14	e2.0	.98	.66	.49	e.47
10	.58	.67	1.1	1.3	1.1	53	e12	e2.0	.91	.66	.38	e.46
11	.61	.68	.65	1.2	1.1	49	e11	e2.0	.92	.66	.37	e.46
12	.60	.72	.71	1.1	1.0	43	e8.5	e1.9	.95	.66	.37	e.46
13	.61	.63	.92	1.1	1.0	41	e8.2	e1.7	.96	.58	.41	e.46
14	.68	.56	.86	1.1	1.1	36	e7.5	1.5	.96	.58	.42	e.45
15	.64	.53	.71	1.1	1.0	27	e7.0	1.3	.96	.57	.42	e.48
16	.66	.57	.84	1.2	1.1	25	e6.8	1.5	.87	.56	.55	e.47
17	.66	.59	.79	1.2	1.2	e23	e6.4	1.6	.77	.59	.42	e.46
18	.69	.60	.97	1.2	1.2	e20	e5.8	1.8	.74	.64	.42	e.47
19	.74	.70	1.1	1.2	1.1	e17	e5.6	1.8	.77	.64	.41	e.48
20	.67	.86	.96	.98	1.1	e40	e5.2	1.7	.75	.66	.46	e.48
21	.61	.77	.86	.98	1.0	e30	e5.0	1.9	.76	.65	.49	e.48
22	.62	.80	1.1	1.0	.98	e27	e4.6	1.8	.77	.64	.69	e.48
23	.66	.76	1.1	1.0	.97	e24	e4.4	1.5	.81	.60	.66	e.49
24	.67	.62	1.1	1.0	1.0	e22	e4.0	1.2	.75	.56	e.60	e.49
25	.74	.53	.91	1.1	.97	e23	e3.7	.98	.81	.55	e.54	e.50
26	.73	.73	.90	1.1	.98	e33	e3.4	.90	.94	.54	e.52	e.50
27	.74	.82	.82	1.2	5.6	105	e3.3	1.3	1.0	.51	e.50	e.50
28	.75	.77	.82	1.2	89	44	e3.2	1.3	1.0	.47	e.50	e.50
29	.76	.71	.87	1.1	---	33	e3.1	1.3	.93	.47	e.50	e.50
30	.75	.68	.94	1.1	---	30	e3.0	1.6	.86	.50	e.47	e.50
31	.74	---	.94	1.1	---	28	---	1.6	---	.63	e.45	---
TOTAL	20.50	20.76	26.66	44.56	122.18	3145	327.7	55.48	26.45	19.26	14.95	14.17
MEAN	.66	.69	.86	1.44	4.36	101	10.9	1.79	.88	.62	.48	.47
MAX	.76	.86	1.5	5.5	89	479	27	2.9	1.5	.76	.69	.50
MIN	.56	.53	.52	.88	.97	17	3.0	.90	.41	.47	.37	.44
AC-FT	41	41	53	88	242	6240	650	110	52	38	30	28

CAL YR 1990 TOTAL 825.66 MEAN 2.26 MAX 40 MIN .52 AC-FT 1640
WTR YR 1991 TOTAL 3837.67 MEAN 10.5 MAX 479 MIN .37 AC-FT 7610

e Estimated.

11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA

LOCATION.--Lat 34°03'54", long 117°17'58", in San Bernardino Grant, San Bernardino County, Hydrologic Unit 18070203, on left bank, 0.4 mi downstream from E Street bridge, 0.4 mi upstream from Warm Creek, 1.2 mi downstream from San Timoteo Creek, 2.8 mi south of San Bernardino, and 26 mi downstream from Big Bear Lake.
DRAINAGE AREA.--541 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1939 to September 1954, October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 940 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 10, 1950, water-stage recorder on right bank 0.4 mi upstream at datum 964.50 ft above NGVD. Nov. 11, 1950, to Sept. 30, 1954, water-stage recorder on both banks 0.4 mi upstream at datum 964.50 ft above NGVD. Oct. 1, 1966, to Sept. 30, 1976, water-stage recorder on right bank 0.4 mi upstream at datum 954.50 ft above NGVD. Oct. 1, 1976, to Sept. 30, 1977, gage was removed for channel construction. Oct. 1, 1977, to Jan. 28, 1981, water-stage recorder on right bank 0.5 mi upstream at elevation 950 ft above NGVD, from topographic map.

REMARKS.--Records fair except for discharges above 200 ft³/s, which are poor. Flow partly regulated by Big Bear Lake (station 11049000). Natural flow of stream affected by ground-water withdrawals and diversion for domestic use and irrigation upstream from station. Effluent from sewage reclamation plant 1.0 mi upstream has caused sustained flow past gage since 1967. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--15 years (water years 1940-54), 12.5 ft³/s, 9,050 acre-ft/yr; 25 years (water years 1967-91), 90.6 ft³/s, 65,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s, Feb. 25, 1969, gage height, 11.9 ft, site and datum then in use; maximum gage height, 16.50 ft, Jan. 23, 1943, site and datum then in use, discharge uncertain, but was probably less than 8,000 ft³/s; no flow for many days many years prior to 1967, minimum daily since 1967, 7.0 ft³/s, Mar. 29, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0730	*6,300	*5.94	Mar. 20	1145	1,980	5.02
Mar. 13	1700	1,050	4.61	Mar. 27	0415	5,570	5.83

Minimum daily, 30 ft³/s, Dec. 25 and Jan. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	34	e36	30	37	3800	71	33	35	35	34	34
2	37	37	e35	31	36	562	60	34	35	35	35	36
3	38	39	e35	129	37	122	56	34	35	35	33	36
4	37	36	e36	223	37	73	57	32	34	33	32	34
5	38	38	e35	118	36	145	60	31	34	34	33	34
6	36	37	e35	e36	36	55	61	31	33	34	35	35
7	35	39	e35	e35	36	36	60	32	34	34	37	35
8	36	36	e35	35	37	35	57	31	32	35	36	34
9	36	37	e34	63	37	34	51	33	35	34	37	36
10	36	37	e34	37	36	37	48	33	40	33	36	34
11	36	36	e35	36	37	53	46	33	40	31	35	36
12	37	38	e34	35	41	37	43	33	39	34	36	35
13	37	38	e34	35	38	163	39	35	36	33	36	33
14	36	35	e35	35	37	72	38	34	33	33	36	34
15	37	36	e35	35	37	47	39	36	33	34	36	36
16	36	41	e34	34	36	40	37	35	33	34	35	41
17	36	35	e34	36	36	38	37	34	34	33	34	40
18	36	36	e34	34	38	36	38	34	32	32	33	39
19	42	38	e33	34	38	402	38	34	31	34	34	33
20	36	45	31	34	42	557	35	35	31	33	34	35
21	35	37	31	35	36	151	36	34	33	33	35	34
22	35	38	31	36	35	85	36	35	33	34	34	34
23	35	38	33	37	35	75	37	34	32	33	35	35
24	35	37	34	36	35	67	35	35	33	32	35	36
25	35	37	30	36	36	209	34	33	33	32	35	35
26	36	41	32	36	36	277	36	31	33	34	36	34
27	36	39	33	36	491	2160	35	34	32	34	35	35
28	35	38	33	35	1900	160	34	35	34	33	35	34
29	35	36	32	36	---	108	35	36	33	34	35	35
30	37	e36	31	36	---	85	34	35	34	34	34	36
31	35	---	32	37	---	75	---	35	---	34	35	---
TOTAL	1124	1125	1041	1481	3349	9796	1323	1044	1019	1040	1081	1058
MEAN	36.3	37.5	33.6	47.8	120	316	44.1	33.7	34.0	33.5	34.9	35.3
MAX	42	45	36	223	1900	3800	71	36	40	35	37	41
MIN	35	34	30	30	35	34	34	31	31	31	32	33
AC-FT	2230	2230	2060	2940	6640	19430	2620	2070	2020	2060	2140	2100

CAL YR 1990 TOTAL 15270 MEAN 41.8 MAX 359 MIN 30 AC-FT 30290
WTR YR 1991 TOTAL 24481 MEAN 67.1 MAX 3800 MIN 30 AC-FT 48560

e Estimated.

11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983-86, 1988 to current year.

WATER TEMPERATURE: November 1982 to September 1983.

SEDIMENT DATA: Water years 1983-86, 1988 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1982 to September 1983.

SUSPENDED-SEDIMENT DISCHARGE: October 1982 to September 1983.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDE (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	
OCT								
05...	0930	38	27.0	3	0.31	--	--	
24...	0910	35	25.0	4	0.38	--	--	
NOV								
01...	0900	34	25.0	13	1.2	--	--	
DEC								
19...	0940	39	21.5	11	1.2	--	--	
JAN								
04...	1025	183	13.5	1120	553	22	31	
22...	1410	46	22.0	5	0.63	--	--	
FEB								
06...	1200	50	22.5	7	0.94	--	--	
21...	1250	44	24.0	6	0.71	--	--	
MAR								
01...	1515	5440	12.0	23100	339000	--	--	
APR								
02...	1445	66	25.0	293	52	--	--	
18...	1500	47	25.5	120	15	--	--	
MAY								
06...	1035	49	25.5	102	13	--	--	
28...	1500	46	27.5	71	8.9	--	--	
JUN								
28...	1530	49	28.0	54	7.2	--	--	
JUL								
08...	1500	45	29.5	41	5.0	--	--	
AUG								
15...	1345	48	30.0	65	8.4	--	--	
SEP								
05...	1545	38	28.5	20	2.1	--	--	
16...	1315	45	29.5	9	1.1	--	--	
DATE		SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
OCT								
05...		--	--	--	--	--	--	--
24...		--	--	--	--	--	--	--
NOV								
01...		--	--	--	--	--	--	--
DEC								
19...		--	--	--	--	--	--	--
JAN								
04...		43	53	59	62	65	89	100
22...		--	--	--	--	--	--	--
FEB								
06...		--	--	--	--	--	--	--
21...		--	--	--	--	--	--	--
MAR								
01...		--	--	--	65	--	--	--
APR								
02...		--	--	--	--	--	--	--
18...		--	--	--	--	--	--	--
MAY								
06...		--	--	--	--	--	--	--
28...		--	--	--	--	--	--	--
JUN								
28...		--	--	--	--	--	--	--
JUL								
08...		--	--	--	--	--	--	--
AUG								
15...		--	--	--	--	--	--	--
SEP								
05...		--	--	--	--	--	--	--
16...		--	--	--	--	--	--	--

11060400 WARM CREEK NEAR SAN BERNARDINO, CA

LOCATION.--Lat 34°04'42", long 117°17'58", in San Bernardino Grant, San Bernardino County, Hydrologic Unit 18070203, on left bank 0.2 mi downstream from Interstate Highway 215 bridge and 2.0 mi southwest of San Bernardino.

DRAINAGE AREA.--11.0 mi².

PERIOD OF RECORD.--February 1964 to September 1972, October 1974 to current year.

REVISED RECORDS.--WDR CA-83-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 960 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1974, at site 0.1 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. Natural channel prior to October 1972; concrete-lined channel since October 1974. Possible diversion during high flows into Warm Creek from Lytle Creek flood detention basin 3.4 mi upstream. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--8 years (water years 1965-72), 1.61 ft³/s, 1,170 acre-ft/yr; 17 years (water years 1975-91), 18.7 ft³/s, 13,550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,500 ft³/s (revised), Mar. 4, 1978, gage height, 4.88 ft, from rating curve extended above 420 ft³/s on basis of step-backwater analysis; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft³/s, Mar. 27, gage height, 2.59 ft, from rating curve extended above 420 ft³/s on basis of step-backwater analysis; minimum daily, 0.51 ft³/s, Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.5	1.9	4.3	5.4	188	9.2	4.9	4.2	2.6	1.4	.63
2	3.5	3.7	2.0	6.5	5.4	6.8	8.9	4.2	4.2	2.5	1.3	.58
3	3.1	3.5	2.2	57	5.5	6.2	8.9	4.2	4.2	2.4	1.2	.68
4	3.1	4.2	2.5	59	5.3	15	8.7	4.2	4.1	2.3	1.1	.82
5	3.5	5.6	2.5	24	6.7	21	9.2	4.1	3.8	2.3	1.1	1.0
6	3.4	4.4	2.9	4.6	5.9	5.6	11	4.2	3.6	2.3	1.0	.62
7	3.1	4.0	2.8	3.9	5.3	5.4	12	3.7	4.2	2.3	.99	.65
8	3.1	3.8	2.7	4.0	5.3	6.1	12	3.7	3.6	2.3	.99	.58
9	3.1	2.7	2.7	15	5.0	6.2	11	4.0	3.6	2.2	.99	.60
10	3.1	2.7	3.1	4.2	4.8	6.5	12	3.6	3.6	1.9	.97	.72
11	3.1	2.7	3.2	4.2	4.8	13	12	3.9	3.5	1.9	.97	.68
12	3.1	3.0	3.2	4.2	4.9	7.8	11	3.4	3.8	1.8	.98	.52
13	3.0	3.6	3.1	4.6	5.2	49	11	4.9	3.1	1.8	.97	.58
14	2.8	3.5	3.1	4.8	5.3	11	11	4.7	3.0	1.8	1.0	.62
15	2.9	3.2	3.1	4.8	4.8	20	11	4.3	2.8	1.8	.97	.62
16	2.9	3.6	3.3	4.0	3.7	7.4	11	4.7	2.7	1.8	1.0	.69
17	2.8	3.7	3.5	4.2	3.6	8.4	10	4.3	2.7	1.7	.97	.82
18	2.9	4.0	4.0	4.6	3.2	9.7	9.7	4.2	2.7	1.6	.97	.90
19	3.6	7.1	3.7	4.3	3.2	87	11	4.2	2.7	1.6	.97	.96
20	2.7	18	4.7	4.2	3.1	119	10	4.2	2.7	1.6	.97	1.1
21	2.7	1.8	4.2	4.2	2.9	10	9.1	4.3	2.8	1.6	.89	1.2
22	2.7	1.7	3.5	4.6	2.7	9.7	8.1	4.2	2.7	1.6	.82	1.6
23	2.7	1.8	3.9	4.7	2.7	11	8.0	4.2	2.7	1.6	.84	.59
24	2.7	1.8	4.2	4.6	2.5	13	7.6	4.3	2.7	1.6	.63	.64
25	3.2	1.8	4.5	4.7	2.7	53	7.2	4.2	2.7	1.6	.58	.74
26	2.9	2.3	5.1	4.9	2.8	82	7.0	4.0	2.7	1.4	.58	.60
27	3.0	2.0	5.2	5.3	176	248	6.5	3.9	2.7	1.4	.58	.66
28	3.0	1.9	5.4	4.9	275	9.5	6.1	3.7	2.7	1.3	.58	.59
29	2.8	1.9	5.7	5.1	---	9.2	6.1	4.0	2.7	1.4	.58	.51
30	3.1	2.1	5.9	5.2	---	9.2	6.1	4.2	2.7	1.4	.93	.57
31	3.1	---	4.1	5.5	---	9.2	---	4.1	---	1.4	.59	---
TOTAL	94.2	109.6	111.9	280.1	563.7	1062.9	282.4	128.7	95.9	56.8	28.41	22.07
MEAN	3.04	3.65	3.61	9.04	20.1	34.3	9.41	4.15	3.20	1.83	.92	.74
MAX	3.6	18	5.9	59	275	248	12	4.9	4.2	2.6	1.4	1.6
MIN	2.7	1.7	1.9	3.9	2.5	5.4	6.1	3.4	2.7	1.3	.58	.51
AC-FT	187	217	222	556	1120	2110	560	255	190	113	56	44

CAL YR 1990 TOTAL 3416.2 MEAN 9.36 MAX 298 MIN 1.7 AC-FT 6780
WTR YR 1991 TOTAL 2836.68 MEAN 7.77 MAX 275 MIN .51 AC-FT 5630

1106200 LYTLE CREEK NEAR FONTANA, CA

LOCATION.--Lat 34°12'44", long 117°27'26", in NW 1/4 SE 1/4 sec.36, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 75 ft upstream from highway culvert crossing, 0.7 mi upstream from right tributary, 2.3 mi downstream from Lytle Creek conduit, and 8 mi north of Fontana.

DRAINAGE AREA.--46.6 mi².

PERIOD OF RECORD.--October 1918 to current year. Combined records of Lytle Creek and diversions, October 1898 to December 1899, October 1904 to current year (published as "at mouth of canyon near Rialto" 1898-99, as "near San Bernardino" 1904-18, and as Lytle Creek and Fontana pipeline near Fontana 1919-31). Monthly discharge only for some periods published in WSP 1315-B.

REVISED RECORDS.--WSP 1011: 1943. WDR CA-83-1: Drainage area.

GAGE.--Water-stage recorder on creek. Elevation of gage is 2,380 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1918 to Mar. 21, 1938, at site 1 mi downstream at different datum. Mar. 22, 1938, to Nov. 20, 1963, at site 75 ft downstream at datum 4.58 ft lower. Water-stage recorders and sharp-crested weirs on conduit since June 3, 1949, and infiltration line since Oct. 1, 1971.

REMARKS.--Records good, except for estimated daily discharges, which are poor. No regulation upstream from station. Southern California Edison Co.'s Lytle Creek conduit diverts 2.3 mi upstream for power development and Fontana Union Water Co. collects water from an infiltration line upstream for irrigation and domestic use. See schematic diagram of Santa Ana River basin. For records of combined discharge of Lytle Creek and diversions, see following page.

AVERAGE DISCHARGE.--Creek only: 73 years, 17.5 ft³/s, 12,680 acre-ft/yr.

Combined creek and diversions: 88 years (water years 1899, 1905-91), 44.1 ft³/s, 31,950 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 35,900 ft³/s, Jan. 25, 1969, gage height, 15.0 ft, from floodmark, from rating curve extended above 570 ft³/s on basis of slope-area measurements at gage heights 10.78 and 15.0 ft; no flow at times most years.

Combined creek and diversions: Maximum discharge, 35,900 ft³/s, Jan. 25, 1969; minimum daily, 0.12 ft³/s, June 21, 22, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Creek only		Discharge (ft ³ /s)
		Discharge (ft ³ /s)	Gage height (ft)	
Mar. 1	0600	*1,300	*5.91	1,307
Mar. 26	2345	307	3.36	312

Creek only: No flow for many days.

Combined creek and diversions: Minimum daily, 6.0 ft³/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	375	e29	17	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	76	e28	17	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	45	e28	16	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	35	28	13	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	36	33	11	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	28	35	9.0	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	28	33	10	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	24	30	9.9	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	22	28	11	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	22	34	11	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	e17	48	9.4	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	e15	e39	7.5	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	23	e30	6.2	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	e20	e25	5.4	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	e15	e28	4.4	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	5.5	e28	3.1	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	2.2	e28	2.5	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.88	27	2.7	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	43	30	2.5	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	37	23	2.8	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	18	23	2.6	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	7.5	23	1.8	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	5.1	22	1.6	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	5.1	21	2.0	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	36	22	2.4	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	72	21	3.0	.00	.00	.00	.00
27	.00	.00	.00	.00	37	e80	19	2.4	.00	.00	.00	.00
28	.00	.00	.00	.00	170	e60	18	2.3	.00	.00	.00	.00
29	.00	.00	.00	.00	---	e45	17	.93	.00	.00	.00	.00
30	.00	.00	.00	.00	---	e30	17	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	e29	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	207.00	1257.28	815	190.43	0.00	0.00	0.00	0.00
MEAN	.0000	.0000	.0000	.0000	7.39	40.6	27.2	6.14	.0000	.0000	.0000	.0000
MAX	.00	.00	.00	.00	170	375	48	17	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.88	17	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	411	2490	1620	378	.00	.00	.00	.00

CAL YR 1990 TOTAL 163.28 MEAN .45 MAX 70 MIN .00 AC-FT 324
WTR YR 1991 TOTAL 2469.71 MEAN 6.77 MAX 375 MIN .00 AC-FT 4900

e Estimated.

SANTA ANA RIVER BASIN

11062001 LYTLE CREEK NEAR FONTANA, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF LYTLE CREEK,
SOUTHERN CALIFORNIA EDISON CO.'S LYTLE CREEK CONDUIT, AND FONTANA UNION WATER CO.'S
INFILTRATION LINE DIVERSIONS, NEAR FONTANA, CA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	8.0	9.1	11	11	382	52	42	24	18	13	13
2	8.4	8.1	9.4	11	13	84	52	42	24	17	12	12
3	8.5	8.6	8.0	12	13	53	52	41	22	17	14	9.2
4	8.7	8.6	7.4	12	11	43	52	39	23	18	15	9.1
5	9.6	8.6	7.5	13	12	44	55	37	24	16	13	9.6
6	10	8.1	7.2	12	12	36	58	35	20	16	14	9.2
7	9.5	7.6	8.1	12	11	35	55	36	22	17	13	12
8	7.5	8.4	8.2	11	11	31	54	37	22	16	12	13
9	6.2	7.5	9.7	12	12	29	52	37	21	16	13	11
10	6.0	8.4	9.1	12	13	29	58	38	19	16	14	12
11	7.2	8.1	8.1	11	12	24	73	36	20	17	14	11
12	7.2	8.5	9.7	12	11	22	64	34	20	15	12	12
13	8.2	7.7	9.3	12	12	30	55	32	20	16	13	13
14	8.6	6.2	8.4	11	11	27	50	32	19	15	13	13
15	7.2	6.7	9.1	9.9	11	24	53	31	20	14	13	13
16	7.1	7.9	11	11	12	20	53	30	21	14	12	12
17	7.4	8.5	10	11	13	21	53	28	19	14	13	12
18	6.9	8.5	10	11	12	23	52	28	19	13	13	13
19	7.7	7.9	10	12	12	51	55	28	19	14	12	13
20	8.4	7.8	9.3	12	11	43	47	29	18	16	13	12
21	8.6	7.0	9.9	12	12	31	47	28	19	16	12	13
22	7.5	7.6	10	11	13	30	47	28	19	14	10	14
23	6.3	7.7	11	9.9	13	28	46	26	19	13	9.8	13
24	6.6	9.0	11	9.3	14	27	45	28	17	14	13	12
25	6.5	8.9	12	9.9	13	49	46	28	16	13	13	13
26	7.1	9.1	11	11	12	77	45	28	16	13	13	11
27	8.0	8.0	10	12	50	85	43	28	17	14	11	12
28	8.5	7.7	10	11	178	65	42	26	18	14	11	13
29	8.1	8.5	11	11	---	59	41	25	19	12	10	13
30	6.7	8.4	11	12	---	53	43	25	19	12	12	12
31	7.1	---	9.9	11	---	52	---	24	---	14	13	---
TOTAL	239.0	241.6	295.4	351.0	541	1607	1540	986	595	464	388.8	360.1
MEAN	7.71	8.05	9.53	11.3	19.3	51.8	51.3	31.8	19.8	15.0	12.5	12.0
MAX	10	9.1	12	13	178	382	73	42	24	18	15	14
MIN	6.0	6.2	7.2	9.3	11	20	41	24	16	12	9.8	9.1
AC-FT	474	479	586	696	1070	3190	3050	1960	1180	920	771	714
CAL YR 1990	TOTAL 4138.2	MEAN 11.3	MAX 83	MIN 5.4	AC-FT 8210							
WTR YR 1991	TOTAL 7608.9	MEAN 20.8	MAX 382	MIN 6.0	AC-FT 15090							

11063500 LONE PINE CREEK NEAR KEENBROOK, CA

LOCATION.--Lat 34°15'59", long 117°27'47", in SE 1/4 SW 1/4 sec.12, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 50 ft upstream from the Atchison, Topeka, & Santa Fe Railway Co. bridge, 150 ft upstream from confluence with Cajon Creek, and 1.1 mi north of Keenbrook.

DRAINAGE AREA.--15.1 mi².

PERIOD OF RECORD.--December 1919 to September 1938, June 1949 to current year.

REVISED RECORDS.--WSP 1635: 1920-22(M), 1924-25(M), 1926-27, 1928(M), 1930, 1931(M), 1932-33, 1934-36(M).
WSP 1928: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,605.92 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 2, 1938, water-stage recorder (destroyed by flood), and Mar. 2 to Sept. 30, 1938, nonrecording gage at same site at datum 0.98 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--60 years (water years 1921-38, 1950-91), 1.78 ft³/s, 1,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,180 ft³/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; no flow Aug. 6-8, Sept. 29, 30, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0600	*266	*4.00	Mar. 26	2230	184	3.45

Minimum daily, 0.04 ft³/s, Oct. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.10	.07	.20	.07	41	7.0	.80	e.25	e.20	.14	.20
2	.09	.11	.07	.20	.07	5.1	6.3	.78	e.25	e.20	.14	.18
3	.08	.10	.07	.22	.07	4.4	5.8	.68	e.25	e.20	.15	.17
4	.07	.10	.07	.20	.08	3.9	5.3	.68	e.25	e.20	.20	.17
5	.08	.10	.07	.20	.09	3.5	4.8	.59	e.25	e.20	.20	.17
6	.10	.08	.07	.13	.07	3.2	4.1	.58	e.24	e.20	.20	.17
7	.11	.07	.07	.07	.08	3.0	3.7	.58	e.24	e.20	.20	.14
8	.11	.07	.07	.07	.09	2.8	3.2	.58	e.24	.20	.20	.14
9	.11	.07	.07	.07	.09	2.6	2.9	.53	e.24	.20	.20	.14
10	.13	.10	.07	.07	.10	2.5	2.5	.48	e.24	.20	.20	.14
11	.09	.10	.08	.07	.10	2.4	2.2	.50	e.23	.20	.20	.14
12	.09	.10	.08	.07	.10	2.3	2.1	.47	e.23	.20	.18	.14
13	.10	.10	.07	.07	.10	2.3	1.9	e.45	e.23	.20	.16	.13
14	.08	.10	.07	.07	.10	2.1	1.8	e.42	e.23	.20	.17	.15
15	.06	.10	.08	.07	.10	2.1	1.7	e.40	e.23	.19	.14	.17
16	.06	.10	.10	.07	.10	2.0	1.6	e.38	e.22	.16	.14	.14
17	.05	.10	.10	.07	.10	2.0	1.6	e.36	e.22	.20	.13	.14
18	.04	.11	.10	.07	.10	1.9	1.5	e.34	e.22	.20	.14	.14
19	.07	.10	.08	e.07	.10	12	1.4	e.32	e.22	.20	.14	.14
20	.08	.08	.10	e.07	.10	8.8	1.3	e.30	e.22	.23	.14	.14
21	.07	.07	.10	e.07	.10	6.6	1.3	e.29	e.21	.23	.14	.14
22	.07	.07	.10	e.07	.10	5.4	1.3	e.28	e.21	.20	.14	.14
23	.07	.07	.10	e.07	.10	4.8	1.2	e.27	e.21	.20	.13	.14
24	.07	.07	.10	e.07	.10	4.4	1.2	.25	e.21	.20	.14	.14
25	.07	.07	.10	e.07	.10	4.8	1.1	e.25	e.21	.20	.14	.14
26	.06	.10	.10	e.07	.10	21	1.0	e.25	e.20	.20	.14	.14
27	.06	.10	.10	e.07	2.1	37	.92	e.25	.20	.20	.14	.14
28	.07	.10	.10	.07	27	13	.92	e.25	e.20	.21	.14	.14
29	.07	.10	.18	.07	---	10	.92	e.25	e.20	.20	.20	.14
30	.08	.08	.20	.07	---	8.7	.92	e.25	e.20	.15	.24	.14
31	.10	---	.20	.07	---	7.6	---	e.25	---	.14	.25	---
TOTAL	2.46	2.72	2.94	2.90	31.51	233.2	73.48	13.06	6.75	6.11	5.17	4.45
MEAN	.079	.091	.095	.094	1.13	7.52	2.45	.42	.22	.20	.17	.15
MAX	.13	.11	.20	.22	.27	41	7.0	.80	.25	.23	.25	.20
MIN	.04	.07	.07	.07	.07	1.9	.92	.25	.20	.14	.13	.13
AC-FT	4.9	5.4	5.8	5.8	63	463	146	26	13	12	10	8.8

CAL YR 1990 TOTAL 51.12 MEAN .14 MAX 7.5 MIN .04 AC-FT 101
WTR YR 1991 TOTAL 384.75 MEAN 1.05 MAX 41 MIN .04 AC-FT 763

e Estimated.

11063510 CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK, CA

LOCATION.--Lat 34°16'04", long 117°27'58", in NW 1/4 NW 1/4 sec.13, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on left bank 0.25 mi downstream from Lone Pine Creek and 0.95 mi north of Keenbrook.

DRAINAGE AREA.--56.5 mi².

PERIOD OF RECORD.--October 1971 to September 1977, October 1983 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,600 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1971, to Sept. 30, 1977, at site 0.25 mi upstream at abandoned diversion dam at different datum.

REMARKS.--Records fair. Concrete control installed Oct. 1, 1987. No regulation or diversion upstream from station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--14 years (water years 1972-77, 1984-91), 7.33 ft³/s, 5,310 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,780 ft³/s, Feb. 11, 1973, gage height, 13.50 ft, site and datum then in use; minimum daily, 1.7 ft³/s, Sept. 5, 6, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*), from rating curve extended above 30 ft³/s on basis of slope-area measurement at gage height 6.02 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0615	*876	*6.38	Mar. 27	0630	526	5.76

Minimum daily, 1.7 ft³/s, Oct. 24, 25, Nov. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.9	2.3	1.9	2.3	198	e12	e4.6	e3.9	2.4	2.6	2.2
2	2.3	1.9	2.2	1.9	2.3	35	e11	e4.5	3.9	2.2	2.3	2.1
3	2.3	1.9	2.2	2.4	2.3	24	e10	e4.4	3.8	2.2	2.3	2.2
4	2.2	1.8	2.2	2.4	2.3	e17	e9.8	e4.4	3.6	e2.3	2.0	2.2
5	2.2	1.7	2.3	2.1	2.2	e12	e9.8	e4.2	3.6	e2.4	2.7	2.4
6	2.2	1.8	2.0	2.0	2.2	9.3	e9.7	e4.2	3.5	e2.4	2.6	2.3
7	2.3	1.9	1.9	2.2	2.2	6.2	e9.7	e4.1	3.4	e2.5	e2.7	2.3
8	2.1	1.9	2.0	2.2	2.2	5.1	e9.7	e4.0	2.9	e2.6	e2.8	2.3
9	2.1	1.9	1.9	2.3	2.3	4.9	e9.8	e3.9	3.0	e3.0	e2.8	2.4
10	2.1	1.9	2.1	2.2	2.3	6.4	e9.6	e3.8	3.3	3.4	e2.9	2.4
11	2.1	2.0	2.1	2.3	2.2	6.0	e9.4	e3.8	2.7	3.3	e3.1	2.6
12	2.1	1.9	2.2	2.5	2.2	5.8	e9.2	e3.7	3.8	3.3	e3.2	2.6
13	2.1	1.9	2.2	2.4	2.2	10	e9.0	e3.7	3.3	2.6	e3.1	2.6
14	2.0	1.9	2.2	2.4	2.2	7.8	e8.6	e3.6	2.8	1.9	e3.1	2.6
15	1.9	1.9	2.2	2.2	2.3	13	e8.2	e3.6	3.4	1.9	e3.3	3.6
16	1.9	1.9	2.2	2.4	2.5	10	e8.0	e3.7	3.0	1.9	e3.4	2.3
17	1.9	1.9	2.2	2.5	2.5	38	e7.8	e3.7	2.8	2.1	e3.5	2.3
18	1.9	2.0	2.2	2.5	2.4	91	e7.5	e3.7	3.0	2.2	e3.3	2.3
19	1.9	2.2	2.2	2.4	2.4	74	e7.3	e3.7	3.0	2.2	3.1	2.3
20	1.9	2.4	2.0	2.4	2.5	55	e7.0	e3.7	3.0	2.2	3.0	2.3
21	1.9	2.2	1.8	2.6	2.5	19	e6.8	e3.8	3.1	2.0	2.8	2.3
22	1.9	2.2	1.9	2.4	2.5	8.3	e6.5	e3.8	3.2	1.9	2.4	2.4
23	1.8	2.1	1.8	2.4	2.5	5.3	e6.0	e3.7	3.1	1.9	2.3	2.4
24	1.7	2.1	1.9	2.5	2.5	3.0	e5.8	e3.7	3.1	2.0	2.1	2.3
25	1.7	2.2	1.9	2.4	2.5	7.4	e5.7	e3.8	3.1	2.1	2.3	2.3
26	1.8	2.3	1.9	2.4	2.5	3.6	e5.4	e3.8	3.0	2.2	2.3	2.3
27	1.8	2.3	1.9	2.4	2.2	120	e5.2	e3.9	3.0	2.3	2.4	2.3
28	1.9	2.3	1.9	2.5	158	e30	e5.0	e3.9	2.8	2.3	2.5	2.2
29	2.0	2.3	1.9	2.4	---	e20	e4.9	e3.9	2.7	2.3	2.5	2.2
30	2.0	2.3	2.0	2.4	---	e15	e4.8	e4.0	2.6	2.4	2.3	2.2
31	1.9	---	2.0	2.3	---	e13	---	e3.9	---	2.6	2.3	---
TOTAL	62.1	60.9	63.7	72.3	241.0	873.1	239.2	121.2	95.4	73.0	84.0	71.2
MEAN	2.00	2.03	2.05	2.33	8.61	28.2	7.97	3.91	3.18	2.35	2.71	2.37
MAX	2.3	2.4	2.3	2.6	158	198	12	4.6	3.9	3.4	3.5	3.6
MIN	1.7	1.7	1.8	1.9	2.2	3.0	4.8	3.6	2.6	1.9	2.0	2.1
AC-FT	123	121	126	143	478	1730	474	240	189	145	167	141

CAL YR 1990 TOTAL 1246.9 MEAN 3.42 MAX 62 MIN 1.7 AC-FT 2470
WTR YR 1991 TOTAL 2057.1 MEAN 5.64 MAX 198 MIN 1.7 AC-FT 4080

e Estimated.

11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA

LOCATION.--Lat 34°12'30", long 117°19'50", in Muscupiabe Grant, San Bernardino County, Hydrologic Unit 18070203, on left bank 0.6 mi downstream from confluence of East and West Forks and 7.5 mi northwest of San Bernardino.
DRAINAGE AREA.--5.49 mi².

PERIOD OF RECORD.--November 1911 to September 1912, October 1913 to September 1914, December 1919 to current year. Monthly figures only for January 1914, published in WSP 1315-B.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder on creek; flowmeter on diversion. Elevation of gage is 2,080 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to December 1919, nonrecording gage at site 0.5 mi downstream at different datum. December 1919 to July 1969, at site 0.4 mi downstream at different datum. July 1969 to September 1972, present gage used as supplementary gage. Oct. 1, 1973, to Feb. 25, 1974, supplementary gage at site 0.5 mi downstream at different datum.

REMARKS.--Records good. No regulation upstream from station. City of San Bernardino diverts upstream from station for municipal supply. See schematic diagram of Santa Ana River basin. Records given below are for creek only unless otherwise indicated.

COOPERATION.--Records of diversion were provided by city of San Bernardino.

AVERAGE DISCHARGE.--Creek only: 72 years (water years 1914, 1921-91), 2.22 ft³/s, 1,610 acre-ft/yr.

Combined creek and diversion: 58 years (water years 1914, 1935-91), 4.13 ft³/s, 2,990 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1913-14 AND SINCE 1919).--Maximum discharge, 3,720 ft³/s, Jan. 25, 1969, gage height, 5.40 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0700	*163	*6.06	Mar. 27	0115	51	5.62

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.17	.00	.00	.81	39	9.3	.11	.00	.00	e.00	.00
2	.00	.06	.02	.40	1.8	8.4	8.3	.12	.00	.00	e.00	.00
3	.00	.17	.17	1.9	2.0	e5.0	5.1	.12	.00	.00	e.00	.00
4	.00	.00	.43	2.9	2.0	e4.0	1.6	.10	.00	.00	e.00	.00
5	.00	.00	.34	3.2	2.2	e3.5	.55	.06	.00	.03	e.00	.07
6	.00	.07	.31	2.4	1.2	3.5	.25	.04	.00	.04	e.00	.11
7	.00	.24	.27	.98	.00	3.1	.20	.03	.00	.00	e.00	.00
8	.00	.24	.00	.35	.35	3.1	.15	.01	.00	.00	e.00	.00
9	.00	.12	.04	2.1	2.0	2.4	.02	.24	.00	1.2	e.00	.00
10	.00	.00	.00	2.0	2.0	1.6	.00	.02	.00	.29	e.00	.00
11	.00	.00	.00	1.8	2.0	2.0	.00	.04	.00	.15	e.00	.00
12	.00	.00	.19	.94	2.0	1.7	.00	.01	.00	.00	e.00	.00
13	.00	.00	.25	.00	.61	3.5	.00	.00	.00	.00	.00	.00
14	.00	.00	.02	.01	.00	3.1	.00	.00	.00	e.00	.00	.07
15	.00	.00	.00	.03	.00	2.9	.00	.00	.00	e.00	.00	.19
16	.00	.01	.73	.93	.00	2.2	.00	.00	.00	e.00	.00	.10
17	.00	.00	.53	1.6	.00	2.3	.00	.00	.00	e.00	.02	.00
18	.00	.00	.93	1.6	.05	2.4	.00	.00	.00	e.00	.00	.00
19	.00	.03	1.0	1.6	.00	7.8	.00	.00	.00	e.00	.00	.00
20	.00	.87	1.0	1.6	.00	10	.00	.00	.00	e.00	.83	.00
21	.00	.44	1.0	1.6	1.4	7.4	.59	.00	.00	e.00	.11	.00
22	.00	.40	1.2	1.6	.86	7.8	.45	.00	.00	e.00	.00	.00
23	.00	.19	1.2	1.0	.02	6.8	.07	.00	.00	e.00	.00	.00
24	.03	.00	1.3	1.4	.00	6.3	.01	.00	.00	e.00	.00	.00
25	.08	.02	1.3	1.6	.00	8.5	.42	.00	.00	e.00	.00	.00
26	.20	.64	.63	1.6	.00	10	.59	.00	.00	e.00	.00	.02
27	.14	.28	.00	1.6	3.8	23	.09	.00	.00	e.00	.00	.08
28	.05	.02	.34	1.6	17	13	.01	.00	.00	e.00	.00	.00
29	.14	.00	1.2	1.8	---	12	.06	.00	.00	e.00	.00	.00
30	.22	.00	1.3	1.0	---	11	.11	.00	.00	e.00	.00	.00
31	.23	---	.81	.00	---	10	---	.00	---	e.00	.00	---
TOTAL	1.14	3.97	16.51	41.14	42.10	227.3	27.87	0.90	0.00	1.71	0.96	0.64
MEAN	.037	.13	.53	1.33	1.50	7.33	.93	.029	.000	.055	.031	.021
MAX	.23	.87	1.3	3.2	17	39	9.3	.24	.00	1.2	.83	.19
MIN	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00
AC-FT	2.3	7.9	33	82	84	451	55	1.8	.00	3.4	1.9	1.3
a	49	36	61	108	124	482	222	85	68	81	74	49

CAL YR 1990 TOTAL 242.42 MEAN .66 MAX 19 MIN .00 AC-FT 481 a 1200
WTR YR 1991 TOTAL 364.24 MEAN 1.00 MAX 39 MIN .00 AC-FT 722 a 1440

e Estimated.

a Combined discharge, in acre-feet, of Devil Canyon Creek and city of San Bernardino diversion.

SANTA ANA RIVER BASIN

11065000 LYTLE CREEK AT COLTON, CA

LOCATION.--Lat 34°04'44", long 117°18'17", in San Bernardino Grant, San Bernardino County, Hydrologic Unit 18070203, on right bank 400 ft downstream from Colton Avenue, 1,930 ft upstream from outlet end of channel, and 1.3 mi northeast of Colton.

DRAINAGE AREA.--186 mi².

PERIOD OF RECORD.--October 1957 to September 1983, October 1984 to current year.

REVISED RECORDS.--WDR CA-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 974.67 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records poor. Flow partly regulated by Lytle Creek spreading grounds 3.2 mi upstream. Diversions upstream from station for irrigation, power development, domestic use, and ground-water replenishment. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft³/s, Mar. 4, 1978, gage height, 14.8 ft, from rating curve extended above 4,200 ft³/s on basis of discharge for design flood at gage height 21.4 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,270 ft³/s, Mar. 27, gage height, 3.31 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.30	.00	.26	e.00	e300	e.10	.00	.00	.48	.00	.00
2	.00	.01	.00	.20	e.00	e10	e.00	.00	.00	.78	.00	.00
3	.00	.00	.00	30	e.00	6.8	e.00	.00	.00	.60	.00	.31
4	.53	.00	.00	50	e.00	10	e.00	.00	.00	.60	.00	.30
5	.60	.00	.00	28	1.8	17	e.00	.00	.00	.26	.00	.58
6	.40	.00	.00	e.70	.18	5.1	e.00	.06	.00	.00	.00	.30
7	.25	.00	.00	e.30	.00	4.5	e.00	.00	.00	.00	.00	.20
8	.14	.00	.00	e.30	.03	4.0	e.00	.00	.00	.00	.00	.29
9	.00	.00	.00	e5.0	.11	3.7	e.00	.00	.00	.00	.00	.20
10	.00	.00	.00	e.30	.09	3.4	e.00	.00	.00	.00	.00	.00
11	.00	.00	.00	e.00	.06	e7.0	e.00	.00	.56	.00	.00	.00
12	.00	.00	.00	e.00	.00	e3.0	e.00	.00	.30	.00	.00	.00
13	.00	.00	.00	e.00	.00	e40	e.00	.00	.30	.00	.00	.00
14	.00	.00	.00	e.00	.00	6.0	e.00	.00	.30	.00	.00	.00
15	.00	.00	.00	e.00	.00	17	e.00	.00	.19	.00	.00	.00
16	.00	.00	.00	e.00	.21	.37	e.00	.00	.65	.00	.00	.00
17	.00	.00	.00	e.00	.15	.30	.00	.00	.60	.30	.00	.00
18	.00	1.6	.00	e.00	.00	.30	.00	.00	.60	.30	.00	.00
19	.45	.66	.00	1.3	.00	68	.00	.00	.52	.17	.66	.00
20	.33	5.7	.00	1.7	.00	174	.00	.00	.30	.00	.24	.00
21	.09	.14	.00	e.00	.00	6.0	.00	.00	.30	.00	.12	.00
22	.00	.00	.00	e.00	.00	5.0	.00	.00	.30	.00	.00	.00
23	.00	.00	.00	1.4	.00	4.2	.00	.00	.21	.00	.00	.00
24	.00	.54	.00	1.1	.00	3.7	.00	.00	.00	.00	.00	.00
25	.00	.08	.07	e.00	.00	28	.00	.00	.00	.00	.00	.00
26	.00	.27	.05	e.00	.00	56	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	e.00	145	421	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	e.00	458	5.9	.00	.00	.00	.00	.00	.00
29	.00	.07	.22	e.00	---	4.6	.00	.00	.00	.00	.00	.77
30	.52	.00	.09	e.00	---	3.6	.00	.00	.00	.00	.00	.43
31	.30	---	.11	e.00	---	e.80	---	.00	---	.00	.00	---
TOTAL	3.61	9.37	0.54	120.56	605.63	1219.27	0.10	0.06	5.13	3.49	1.02	3.38
MEAN	.12	.31	.017	3.89	21.6	39.3	.003	.002	.17	.11	.033	.11
MAX	.60	5.7	.22	50	458	421	.10	.06	.65	.78	.66	.77
MIN	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00	.00
AC-FT	7.2	19	1.1	239	1200	2420	.2	.1	10	6.9	2.0	6.7
CAL YR 1990	TOTAL	779.23	MEAN	2.13	MAX	302	MIN	.00	AC-FT	1550		
WTR YR 1991	TOTAL	1972.16	MEAN	5.40	MAX	458	MIN	.00	AC-FT	3910		

e Estimated.

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA

LOCATION.--Lat 33°58'07", long 117°26'51", in NE 1/4 SW 1/4 sec.30, T.2 S., R.5 W., Riverside County, Hydrologic Unit 18070203, on right bank at MWD pipeline crossing, 0.8 mi downstream from Union Pacific Railroad bridge, 1.1 mi upstream from bridge on Van Buren Boulevard, and 3.3 mi north of Arlington.
 DRAINAGE AREA.--852 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1970 to current year.

REVISED RECORDS.--WDR CA-83-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 685 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1984, water-stage recorder at site 300 ft upstream on left bank at different datum.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (station 11049000). Natural streamflow affected by ground-water withdrawals, diversions for irrigation, and return flows from irrigated areas. The records at this station are equivalent to those collected at Santa Ana River at Riverside Narrows, near Arlington minus the flow at Riverside Water Quality Control Plant at Riverside Narrows, near Arlington.

AVERAGE DISCHARGE.--21 years (water years 1971-91), 112 ft³/s, 81,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,200 ft³/s, Mar. 2, 1983, gage height, 15.38 ft, site and datum then in use, from rating curve extended above 5,100 ft³/s on basis of area-velocity study; maximum gage height, 20.23 ft, Mar. 4, 1978; minimum daily, 15 ft³/s, Sept. 7, 8, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1927, 100,000 ft³/s, Mar. 2, 1938, on basis of slope-area measurement at site 1.1 mi downstream. Flood of Jan. 22, 1862, 320,000 ft³/s, on basis of slope-conveyance study at site 8.2 mi upstream. Stage at that site was 5 ft higher than that of Mar. 2, 1938.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1230	5,600	11.61	Mar. 27	0700	*10,000	*13.57
Mar. 20	1430	2,440	9.49				

Minimum daily, 34 ft³/s, Sept. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	56	64	71	83	3990	137	68	49	51	44	37
2	57	58	63	71	88	562	116	66	56	49	44	37
3	58	55	64	164	91	166	109	64	63	48	40	38
4	54	55	65	467	109	148	107	62	64	47	38	37
5	52	56	63	286	72	259	108	56	63	45	40	39
6	50	57	e64	57	89	e100	106	57	70	43	39	42
7	49	55	e64	50	87	e90	98	57	69	42	41	40
8	50	51	e66	48	86	e80	95	59	71	44	39	39
9	50	51	e67	137	81	67	87	59	69	44	38	39
10	51	50	e65	68	78	65	84	61	71	45	38	39
11	52	46	e63	54	66	114	79	54	73	42	36	41
12	51	44	e60	55	82	69	83	53	74	43	38	43
13	52	46	e72	55	86	167	83	53	74	41	40	45
14	53	46	76	57	78	158	80	52	76	40	39	45
15	56	44	76	62	79	124	83	57	78	41	40	41
16	56	43	77	61	83	82	83	55	76	40	41	43
17	56	42	79	64	79	67	82	55	74	41	39	42
18	56	45	85	105	88	61	82	52	74	43	38	40
19	59	44	89	72	92	405	81	50	69	43	38	38
20	58	104	91	71	87	794	81	53	55	42	41	38
21	57	72	94	68	81	286	81	52	54	41	40	36
22	58	63	85	69	77	231	75	55	54	44	38	35
23	59	61	81	77	81	179	73	53	51	43	37	37
24	60	58	81	72	76	150	79	53	54	44	37	38
25	57	56	76	63	77	262	79	49	55	42	37	36
26	58	62	72	78	79	308	81	45	57	42	39	34
27	56	64	74	80	386	3650	79	46	55	43	39	38
28	54	64	75	74	3050	286	71	52	56	42	40	37
29	54	65	73	68	---	229	69	50	53	42	37	37
30	57	64	70	83	---	181	73	51	50	40	39	38
31	57	---	71	94	---	158	---	52	---	43	38	---
TOTAL	1700	1677	2265	2901	5591	13488	2624	1701	1907	1340	1212	1169
MEAN	54.8	55.9	73.1	93.6	200	435	87.5	54.9	63.6	43.2	39.1	39.0
MAX	60	104	94	467	3050	3990	137	68	78	51	44	45
MIN	49	42	60	48	66	61	69	45	49	40	36	34
AC-FT	3370	3330	4490	5750	11090	26750	5200	3370	3780	2660	2400	2320

CAL YR 1990 TOTAL 28038 MEAN 76.8 MAX 870 MIN 42 AC-FT 55610
 WTR YR 1991 TOTAL 37575 MEAN 103 MAX 3990 MIN 34 AC-FT 74530

e Estimated.

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1970 to current year.

SPECIFIC CONDUCTANCE: Water years 1970-78.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT					
04...	0945	63	918	20.5	566
25...	1020	64	920	18.0	572
NOV					
06...	0920	67	920	15.5	566
21...	1015	76	904	16.5	550
DEC					
10...	0930	58	950	14.0	578
20...	1135	75	970	14.5	601
JAN					
02...	1015	65	920	14.0	575
22...	1115	51	986	15.0	608
FEB					
07...	1000	64	980	15.5	592
20...	0945	66	968	15.0	585
MAR					
20...	1215	1750	165	11.5	111
APR					
08...	1130	82	848	20.0	547
17...	1315	67	975	23.0	600
MAY					
14...	1345	53	980	26.0	--
28...	1015	50	954	18.5	--
JUN					
10...	1030	71	975	22.0	630
27...	1015	55	970	19.5	590
JUL					
08...	1015	44	950	22.0	602
22...	1000	47	936	19.5	598
AUG					
05...	0945	44	945	20.5	596
13...	1030	46	962	25.0	603
SEP					
04...	1000	41	974	22.0	595
24...	0930	44	960	21.0	596

11069500 SAN JACINTO RIVER NEAR SAN JACINTO, CA

LOCATION.--Lat 33°44'10", long 116°49'26", in NE 1/4 SE 1/4 sec.13, T.5 S., R.1 E., Riverside County, Hydrologic Unit 18070202, on right bank 350 ft upstream from bridge on State Highway 74, 1 mi downstream from North Fork San Jacinto River, 8.3 mi southeast of San Jacinto, and 9 mi downstream from Lake Hemet.

DRAINAGE AREA.--141 mi².

PERIOD OF RECORD.--October 1920 to February 1927, March 1927 to September 1991 (discontinued). River only records for October 1969 to September 1980 and October 1981 to September 1991 are at site upstream of Lake Hemet Municipal Water District's lower canal and are equivalent to other records if lower canal diversion is deducted from flow past station. Records of lower canal diversion are available at Lake Hemet Municipal Water District. Combined records of river and diversions are equivalent for October 1948 to September 1981. Combined records of river and diversion for October 1981 to September 1990, published in WDR CA-82-1 to WDR CA-90-1, are not equivalent due to diversion for municipal supply upstream of gages beginning in 1982. Monthly discharge only for October 1920 and July to September 1926, are published in WSP 1315-B.

REVISED RECORDS.--WSP 881: 1938. WSP 1635: 1950. WSP 1928: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of river gage is 1,982.75 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Feb. 15, 1927, water-stage recorder at site about 200 ft downstream at different datum. Feb. 15, 1927, to December 1929 staff gage 350 ft downstream at different datum. December 1929 to Feb. 6, 1937 water-stage recorder 350 ft downstream at different datum. Feb. 7, 1937, to Jan 22, 1948, staff gage at site 350 ft downstream at various datums. Jan. 23, 1948, to September 1969 and October 1980 to September 1981, water-stage recorder at site 350 ft downstream at same datum.

REMARKS.--Records poor. Flow partly regulated by Lake Hemet. Lake Hemet Municipal Water District's upper canal diverts 4.0 mi upstream from station. Several other small diversions in the basin. Diversion upstream from station began prior to 1920. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--(River only) 59 years (water years 1921-26, 1928-69, 1981-91), 18.0 ft³/s, 13,040 acre-ft/yr; 11 years (water years 1970-80), 29.0 ft³/s, 21,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--(River only) Maximum discharge, 45,000 ft³/s, Feb. 16, 1927 on basis of slope-area measurement of peak flow; no flow for several months in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*), from rating curve extended above 1,500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 3	0845	*2,410	*6.64				
No flow for many days.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	.00	.00	.05	1530	99	31	4.7	.00	5.3	e.00
2	e.00	.00	.00	.00	.05	175	75	34	4.2	.00	.39	e.00
3	e.00	.00	.00	.00	.05	72	62	25	3.7	.00	.12	e.00
4	e.01	.00	.00	.69	.05	51	67	22	3.1	.00	.01	e.00
5	.00	.00	.00	4.1	.05	71	91	22	3.0	.00	.00	e.00
6	.04	.00	.00	.20	.05	43	94	23	2.3	.00	.00	e.00
7	.03	.00	.00	.43	.05	31	82	25	1.4	.17	.00	e.00
8	.01	.00	.00	.40	.05	26	76	28	1.2	.08	.00	e.00
9	.00	.00	.00	.34	.05	27	74	30	.90	.04	.00	e.00
10	.00	.16	.00	.30	.05	22	67	22	.65	.03	.00	e.00
11	.00	.00	.00	.22	.05	13	65	18	.42	.03	2.4	e.00
12	.00	.00	.00	.21	.05	12	50	16	.31	.03	6.2	.00
13	.00	.00	.03	.18	.05	13	43	14	.22	.03	.26	.00
14	.00	.00	.04	.11	.05	16	43	13	.12	.02	.00	.00
15	.00	.00	.00	.75	.05	11	51	13	.10	.02	.00	.00
16	.00	.00	.00	.93	.05	9.1	53	12	.08	.02	.83	.00
17	.00	.00	.00	.08	.06	9.4	40	13	.02	.02	2.2	.00
18	.00	.00	.00	.07	.08	9.7	35	12	.00	.02	1.9	.00
19	.00	.00	.00	.07	.08	18	31	10	.00	.02	.76	.00
20	.00	.00	.00	.07	.08	40	31	8.9	.00	.02	.56	.00
21	.00	.00	.00	.09	.08	33	24	7.8	.00	.02	.56	.00
22	.00	.00	.00	.08	.08	27	27	7.4	.00	.02	.08	.00
23	.00	.00	.00	.06	.08	29	32	6.7	.00	.02	.05	.00
24	.00	.00	.00	.06	.08	30	32	6.5	.00	.01	.00	.00
25	.00	.00	.00	.06	.08	45	36	7.1	.00	.02	e.00	.00
26	.00	.00	.00	.06	.07	54	29	6.9	.00	.01	e.00	.00
27	.00	.00	.00	.07	.13	85	29	6.5	.00	.02	e.00	.00
28	.00	.00	.00	.07	210	78	27	5.5	.00	.01	e.00	.00
29	.00	.00	.00	.07	---	108	27	5.4	.00	.00	e.00	.00
30	.00	.00	.00	.07	---	128	29	5.1	.00	.00	e.00	.00
31	.00	---	.00	.06	---	108	---	5.5	---	12	e.00	---
TOTAL	0.09	0.16	0.07	9.90	211.70	2924.2	1521	462.3	26.42	12.68	21.62	0.00
MEAN	.003	.005	.002	.32	7.56	94.3	50.7	14.9	.88	.41	.70	.000
MAX	.04	.16	.04	4.1	210	1530	99	34	4.7	12	6.2	.00
MIN	.00	.00	.00	.00	.05	9.1	24	5.1	.00	.00	.00	.00
AC-FT	.2	.3	.1	20	420	5800	3020	917	52	25	43	.00

CAL YR 1990 TOTAL 151.38 MEAN .41 MAX 23 MIN .00 AC-FT 300
WTR YR 1991 TOTAL 5190.14 MEAN 14.2 MAX 1530 MIN .00 AC-FT 10290
e Estimated.

11070020 BAUTISTA CREEK AT HEAD OF FLOOD CONTROL CHANNEL, NEAR HEMET, CA

LOCATION.--Lat 33°42'42", Long 116°52'04", in NW 1/4 NE 1/4 sec.27, T.5 S., R.1 E., Riverside County, Hydrologic Unit 18070202, on right bank at the head of the concrete lined flood channel, 3.7 mi upstream from the mouth, and 3.0 mi southeast of Valle Vista.

DRAINAGE AREA.--47.6 mi².

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,080 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1988 at datum 10.00 ft lower.

REMARKS.--No estimated daily discharges. Records poor. No regulation upstream from station. Sand and gravel operations upstream from station may reduce runoff and cause peak attenuation. Minor diversion upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 494 ft³/s, Mar. 1, 1991, gage height, 2.37 ft, from rating curve developed on basis of critical-depth computations at concrete control; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*), from rating curve developed on basis of critical-depth computations at concrete control:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0500	*494	*2.37	Mar. 27	0345	279	2.24
Mar. 20	1245	103	1.47				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	219	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	6.8	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	41	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	6.6	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	9.0	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	66	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	18	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	9.1	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	.00	.05	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	376.65	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	12.1	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	219	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	747	.00	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 376.65 MEAN 1.03 MAX 219 MIN .00 AC-FT 747

11070240 SUNNYMEAD CHANNEL AT ALESSANDRO BOULEVARD, NEAR SUNNYMEAD, CA

LOCATION.--Lat 33°55'02", long 117°14'34", in SW 1/4 SW 1/4 sec.7, T.3 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on left bank 1.6 mi south of Sunnymead.

DRAINAGE AREA.--13.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to current year. Discharge records for the period January 1970 to June 1975 available in U.S. Geological Survey Open-File Report 79-1256.

GAGE.--Water-stage recorder. Elevation of gage is 1,570 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 561 ft³/s, Feb. 17, 1990, gage height, 7.47 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 437 ft³/s, Mar. 27, gage height, 6.98 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	e.00	e.00	.00	.03	143	e.05	e.00	e.00	e.00	e.50	e.00
2	e.00	e.00	e.00	.00	.04	43	e.00	e.00	e.00	e.00	e.10	e.00
3	e.00	e.00	e.00	27	.06	22	e.00	e.00	e.00	e.00	e.00	e.00
4	e.00	e.00	e.00	31	.10	23	e.00	e.00	e.00	e.00	e.00	e.00
5	e.00	e.00	e.00	5.2	.06	20	e.00	e.00	e.00	e.00	e.00	e.00
6	e.00	e.00	e.00	.27	.05	9.5	e.00	e.00	e.00	e.00	e.00	e.00
7	e.00	e.00	e.00	.38	.02	6.5	e.00	e.00	e.00	e.00	e.00	e.00
8	e.00	e.00	e.00	.35	.03	2.5	e.00	e.00	e.00	e.00	e.00	e.00
9	e.00	e.00	e.00	11	.05	1.3	e.00	e.00	e.00	e.00	e.00	e.00
10	e.00	e.00	e.00	.47	.05	1.3	e.00	e.00	e.00	e.00	e.00	e.00
11	e.00	e.00	e.00	.00	.03	13	e.00	e.00	e.00	e.00	e.00	e.00
12	e.00	e.00	.00	.29	.01	5.3	e.00	e.00	e.00	e.00	e.00	e.00
13	e.00	e.00	.00	.04	.03	19	e.00	e.00	e.00	e.00	e.00	e.00
14	e1.0	e.00	.00	.00	.02	7.7	e.00	e.00	e.00	e.00	e.00	e.00
15	e.60	e.00	.00	.00	.05	3.9	e.00	e.00	e.00	e.00	e.00	e.00
16	e.10	e.00	.01	.00	.05	2.0	e.00	e.00	e.00	e.00	e.00	e.00
17	e.00	e.00	.00	.00	.03	1.3	e.00	e.00	e.00	e.00	e.00	e.00
18	e.00	e.00	.00	.02	.00	1.4	e.00	e.00	e.00	e.00	e.00	e.00
19	e.00	e.00	.04	.05	.01	24	e.00	e.00	e.00	e.00	e.00	e.00
20	e.00	e.00	.00	.03	.00	48	e.00	e.00	e.00	e.00	e.00	e.00
21	e.00	e.00	.00	.02	.01	12	e.00	e.00	e.00	e.00	e.00	e.00
22	e.00	e.00	.00	.01	.00	.95	e.00	e.00	e.00	e.00	e.00	e.00
23	e.00	e.00	.00	.03	.00	.96	e.00	e.00	e.00	e.00	e.00	e.00
24	e.00	e.00	.00	.02	.00	1.0	e.00	e.00	e.00	e.00	e.00	e.00
25	e.00	e.00	.00	.03	.00	6.6	e.00	e.00	e.00	e.00	e.00	e.00
26	e.00	e2.5	.00	.04	.00	16	e.00	e.00	e.00	e.00	e.00	e.00
27	e.00	e.50	.00	.03	70	95	e.00	e.00	e.00	e.00	e.00	e.00
28	e.00	e.10	.00	.02	124	1.1	e.00	e.00	e.00	e.00	e.00	e.00
29	e.00	e.00	.00	.02	---	.76	e.00	e.00	e.00	e.00	e.00	e.00
30	e.00	e.00	.00	.04	---	.48	e.00	e.00	e.00	.50	e.00	e.00
31	e.00	---	.00	.05	---	.31	---	e.00	---	2.8	e.00	---
TOTAL	1.71	3.10	0.05	76.41	194.73	532.86	0.05	0.00	0.00	3.30	0.60	0.00
MEAN	.055	.10	.002	2.46	6.95	17.2	.002	.000	.000	.11	.019	.000
MAX	1.0	2.5	.04	31	124	143	.05	.00	.00	2.8	.50	.00
MIN	.00	.00	.00	.00	.00	.31	.00	.00	.00	.00	.00	.00
AC-FT	3.4	6.1	.1	152	386	1060	.1	.00	.00	6.5	1.2	.00
CAL YR 1990	TOTAL 206.24	MEAN .57	MAX 77	MIN .00	AC-FT 409							
WTR YR 1991	TOTAL 812.81	MEAN 2.23	MAX 143	MIN .00	AC-FT 1610							

e Estimated.

11070240 SUNNYMEAD CHANNEL AT ALESSANDRO BOULEVARD, NEAR SUNNYMEAD, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--March 1990 to current year. Precipitation records for the period January 1970 to June 1975 available in U.S. Geological Survey Open File Report 79-1256.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Mar. 5, 1990.

REMARKS.--Periods of missing record due to instrument failure.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.79 in, Feb. 27, 1991; no rainfall for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.79 in, Feb. 27; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.24	---	.00	.00	.00	.00	.00
2	.00	.00	.04	.00	.00	.00	---	.02	.00	.00	.00	.00
3	.00	.00	.00	1.09	.00	.00	---	.00	.00	.00	.00	.00
4	.00	.00	.00	.70	.00	.10	---	.00	.00	.00	.00	.00
5	.00	.00	.00	.01	.00	.05	---	.00	.00	.00	.00	.03
6	.00	---	.00	.01	.00	.00	---	.00	.00	.00	.00	.00
7	.00	---	.00	.00	.00	.00	---	.00	.00	.00	.00	.00
8	.00	---	.00	.00	.00	.00	---	.00	.00	.00	.00	.00
9	.00	---	.00	.40	.00	.00	---	.00	.00	.00	.00	.00
10	.00	---	.00	.00	.00	.00	---	.00	.00	.00	.00	.00
11	.00	---	.00	.00	.00	.08	.00	.00	.00	.00	.00	.01
12	.00	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	---	.00	.00	.00	.38	.00	.00	.00	.00	.00	.00
14	.00	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.01	.00	.00	.05	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
19	.01	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.01	.00	---	.02	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
25	.00	.05	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
26	.00	.24	.00	.00	.00	---	.00	.00	.00	.00	.00	.03
27	.00	.00	.00	.00	1.79	---	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	1.04	---	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	---	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	---	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	---	---	.00	---	.14	.00	---
TOTAL	0.01	---	0.05	2.22	2.83	---	---	0.02	0.00	0.14	0.00	0.07

11070256 PERRIS VALLEY STORM DRAIN AT NANDINO AVENUE, NEAR MARCH AIR FORCE BASE, CA

LOCATION.--Lat 33°52'01", long 117°12'43", in SE 1/4 NE 1/4 sec.32, T.3 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on right bank 3.5 mi southeast of March Air Force Base.

DRAINAGE AREA.--50.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to current year. Records for January 1970 to September 1975, available in files of the Geological Survey.

GAGE.--Water-stage recorder, crest-stage gage, and broad-crested weir. Elevation of gage is 1,445 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft³/s, Mar. 27, 1991, gage height, 5.57 ft; no flow for several days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,220 ft³/s, Mar. 27, gage height, 5.57 ft, from rating curve extended above 269 ft³/s on basis of critical-depth computation; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	.22	.12	.08	.00	422	.02	.00	.07	.00	.37	.13
2	.57	.23	.12	.11	.03	37	.00	.00	.12	.02	.23	.11
3	.54	.21	.19	104	.16	1.4	.00	.00	.11	.04	.08	.15
4	.47	.22	.18	174	.14	.79	.00	.00	.00	.13	.13	.02
5	.39	.32	.13	24	.08	14	.00	.00	.00	.02	.10	.06
6	.38	.31	.15	.49	.05	.05	.00	.00	.00	.33	.07	.34
7	.41	.03	.02	.34	.00	.03	.05	.00	.00	.00	.04	.13
8	.39	.13	.11	.24	.00	.01	.07	.00	.00	.06	.03	.15
9	.35	.37	.17	43	.00	.00	.00	.02	.00	.04	.02	.14
10	.38	.33	.29	3.9	.00	.00	.00	.03	.00	.19	.08	.14
11	.23	.33	.24	.45	.00	2.7	.00	.12	.01	.18	.09	.07
12	.40	.33	.14	.29	.00	.00	.00	.00	.08	.12	.04	.10
13	.41	.36	.06	.23	.00	45	.00	.00	.01	.06	.12	.12
14	.40	.32	.15	.18	.00	8.1	.00	.40	.01	.02	.14	.07
15	.37	.33	.06	.16	.00	1.5	.00	1.4	.00	.12	.12	.05
16	.36	.33	.30	4.3	.00	.32	.00	.00	.00	.14	.15	.08
17	.37	.33	.07	.22	.00	.00	.00	.00	.00	.00	.11	.13
18	.37	.33	.12	12	.00	.00	.00	.00	.00	.15	.10	.00
19	.41	.33	.19	12	.00	70	.00	.00	.01	.15	.04	.10
20	.29	16	.13	2.8	.00	185	.00	.00	.00	.24	.06	.02
21	.20	.24	.01	2.6	.00	52	.47	.00	.11	.22	.00	.06
22	.20	.12	.00	.58	.00	1.0	.08	.04	.21	.21	.00	.01
23	.32	.19	.00	.21	.00	.11	.00	.02	.14	.09	.09	.14
24	.30	.33	.00	.10	.00	.00	.00	.00	.22	.10	.17	.03
25	.33	.33	.00	.04	.00	37	.00	.07	.00	.11	.17	.07
26	.35	1.8	.00	.00	.00	117	.00	.00	.00	.13	.13	.14
27	.37	.25	.00	.00	261	501	.00	.00	.00	.06	.06	.24
28	.37	.03	.03	.00	293	6.8	.00	.00	.00	.01	.02	.00
29	.35	.02	.17	.00	---	.34	.00	.10	.00	.07	.00	.00
30	.27	.05	.15	.12	---	.40	.00	.11	.00	.07	.04	.00
31	.20	---	.07	.06	---	.00	---	.05	---	4.0	.12	---
TOTAL	11.28	24.72	3.37	386.50	554.46	1503.55	0.69	2.36	1.10	7.08	2.92	2.80
MEAN	.36	.82	.11	12.5	19.8	48.5	.023	.076	.037	.23	.094	.093
MAX	.57	16	.30	174	293	501	.47	1.4	.22	4.0	.37	.34
MIN	.20	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	22	49	6.7	767	1100	2980	1.4	4.7	2.2	14	5.8	5.6

CAL YR 1990 TOTAL 570.27 MEAN 1.56 MAX 130 MIN .00 AC-FT 1130
WTR YR 1991 TOTAL 2500.83 MEAN 6.85 MAX 501 MIN .00 AC-FT 4960

11070256 PERRIS VALLEY STORM DRAIN AT NANDINO AVENUE, NEAR MARCH AIR FORCE BASE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--October 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Oct. 12, 1989.

REMARKS.--Period of missing record due to instrument failure.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.98 in, Feb. 27, 1991; no rainfall for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.98 in, Feb. 27; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.10	.00	.00	.00	.00	.00	---
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---
3	.00	.00	.00	.90	.00	.00	.00	.00	.00	.00	.00	---
4	.00	.00	.00	.28	.00	.14	.00	.00	.00	.00	.00	---
5	.00	.00	.00	.01	.00	.04	.00	.00	.00	.00	---	---
6	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	---	---
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	---
8	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	---	---
9	.00	.00	.00	.47	.00	.00	.00	.00	.00	.00	---	---
10	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00	---	---
11	.00	.00	.00	.00	.00	.11	.00	.00	.00	.00	---	---
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	---
13	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	---	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00
15	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	---	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00
18	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	---	.00
19	.04	.15	.01	.00	.00	.45	.00	.00	.00	.00	---	.00
20	.00	.22	.00	.00	.00	1.14	.00	.00	.00	.00	---	.00
21	.00	.00	.00	.01	.00	.10	.00	.00	.00	.00	---	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00
25	.00	.00	.00	.00	.00	.29	.00	.00	.00	.00	---	.00
26	.00	.08	.00	.00	.00	1.06	.00	.00	.00	.00	---	.01
27	.00	.00	.00	.00	1.98	.88	.00	.00	.00	.00	---	.00
28	.00	.00	.00	.00	1.09	.00	.00	.00	.00	.00	---	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	---	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	---	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.25	---	---
TOTAL	0.04	0.46	0.01	1.68	3.07	5.80	0.00	0.06	0.00	0.25	---	---

11070262 FERRIS VALLEY STORM DRAIN LATERAL "B" NEAR MARCH AIR FORCE BASE, CA

LOCATION.--Lat 33°51'32", long 117°13'32", in NE 1/4 NE 1/4 sec.6, T.4 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on right bank 0.5 mi southeast of March Air Force Base.

DRAINAGE AREA.--10.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to current year. October 1969 to July 1975, published as "near March Field" in U.S. Geological Survey Open-File Report 79-1256.

GAGE.--Water-stage recorder. Elevation of gage is 1,470 ft above National Geodetic Vertical Datum of 1929, from topographic map. November 1969 to July 1975, at same site at different datum.

REMARKS.--No estimated daily discharges. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 200 ft³/s, Mar. 27, 1991, gage height, 3.40 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 200 ft³/s, Mar. 27, gage height, 3.40 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.27	.25	.09	.00	44	.00	.00	.00	.00	.00	.00
2	.00	.01	.22	.12	.00	1.3	.00	.00	.00	.00	.11	.00
3	.08	.20	.15	3.0	.00	.01	.00	.00	.00	.00	.26	.00
4	.13	.02	.27	19	.00	.00	.00	.00	.00	.00	.29	.00
5	.12	.19	.29	1.7	.21	.00	.00	.00	.00	.00	.22	.04
6	.14	.22	.27	.00	.38	.00	.00	.00	.00	.00	.38	.00
7	.13	.22	.27	.00	.43	.00	.00	.00	.00	.00	.29	.00
8	.14	.20	.25	.00	.56	.00	.00	.00	.00	.00	.31	.00
9	.17	.28	.21	2.0	.42	.00	.00	.00	.00	.00	.44	.00
10	.14	.26	.17	.29	.04	.00	.00	.00	.00	.00	.42	.00
11	.24	.12	.28	.00	.19	.00	.00	.00	.00	.00	.83	.08
12	.26	.20	.25	.00	.66	.00	.00	.00	.00	.00	.20	.00
13	.25	.22	.24	.00	.72	.00	.00	.00	.00	.00	.11	.00
14	.23	.25	.29	.00	.83	.28	.00	.00	.00	.00	.14	.00
15	.14	.03	.22	.00	.69	.00	.00	.00	.00	.00	.07	.00
16	.16	.18	.01	.00	.40	.00	.00	.00	.00	.00	.01	.00
17	.26	.21	.11	.00	.05	.00	.00	.00	.00	.00	.10	.00
18	.25	.17	.26	.00	.24	.00	.00	.00	.00	.00	.08	.03
19	.24	.15	.30	.00	.80	1.5	.00	.00	.00	.00	.06	.00
20	.23	.25	.26	.00	1.0	10	.00	.00	.00	.00	.14	.00
21	.28	.00	.21	.00	1.0	2.9	.00	.00	.00	.00	.03	.00
22	.30	.00	.10	.00	.94	.05	.00	.00	.00	.00	.07	.00
23	.28	.03	.00	.00	.86	.00	.00	.00	.00	.00	.00	.00
24	.30	.21	.00	.00	.36	.00	.00	.00	.00	.00	.07	.00
25	.33	.06	.00	.00	.43	.41	.00	.00	.00	.00	.00	.00
26	.36	.14	.12	.00	.93	2.7	.00	.00	.00	.00	.10	.00
27	.35	.21	.26	.00	17	51	.00	.00	.00	.00	.03	.00
28	.30	.17	.28	.00	27	.57	.00	.00	.00	.00	.00	.00
29	.27	.13	.08	.00	---	.15	.00	.00	.00	.00	.00	.00
30	.28	.22	.06	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.30	---	.23	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	6.76	4.82	5.91	26.20	56.14	114.87	0.00	0.00	0.00	0.00	4.76	0.15
MEAN	.22	.16	.19	.85	2.00	3.71	.000	.000	.000	.000	.15	.005
MAX	.36	.28	.30	.19	.27	.51	.00	.00	.00	.00	.83	.08
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	13	9.6	12	52	111	228	.00	.00	.00	.00	9.4	.3

CAL YR 1990 TOTAL 131.34 MEAN .36 MAX 5.3 MIN .00 AC-FT 261
WTR YR 1991 TOTAL 219.61 MEAN .60 MAX 51 MIN .00 AC-FT 436

11070262 FERRIS VALLEY STORM DRAIN LATERAL "B" NEAR MARCH AIR FORCE BASE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--December 1990 to September 1991.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Dec. 20, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.84 in, Feb. 27; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	.00	.00	.97	.01	.00	.00	.00	.00	.00
2	---	---	---	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	---	---	---	.83	.00	.00	.00	.00	.00	.00	.00	.00
4	---	---	---	.12	.00	.12	.00	.00	.00	.00	.00	.00
5	---	---	---	.00	.00	.04	.00	.00	.00	.00	.00	.00
6	---	---	---	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	---	---	---	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	---	---	---	.01	.00	.00	.00	.00	.00	.00	.00	.00
9	---	---	---	.38	.00	.00	.00	.00	.00	.00	.00	.00
10	---	---	---	.00	.00	.00	.00	.06	.00	.00	.00	.00
11	---	---	---	.00	.00	.08	.00	.00	.00	.00	.00	.02
12	---	---	---	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	---	---	---	.00	.00	.26	.00	.00	.00	.00	.00	.00
14	---	---	---	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	---	---	---	.00	.00	.05	.00	.00	.00	.00	.00	.00
16	---	---	---	.00	.00	.01	.00	.00	.00	.00	.00	.00
17	---	---	---	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	---	---	---	.00	.00	.10	.00	.00	.00	.00	.00	.00
19	---	---	---	.00	.00	.42	.00	.00	.00	.00	.00	.00
20	---	---	.00	.00	.00	1.04	.00	.00	.00	.00	.00	.00
21	---	---	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00
22	---	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	---	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	---	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	---	---	.00	.00	.00	.27	.00	.00	.00	.00	.00	.00
26	---	---	.00	.00	.00	.91	.00	.00	.00	.00	.00	.00
27	---	---	.00	.00	1.84	.78	.00	.00	.00	.00	.00	.00
28	---	---	.00	.00	1.08	.00	.00	.00	.00	.00	.00	.00
29	---	---	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	---	---	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	---	---	.00	.00	---	.00	---	.00	---	.38	.00	---
TOTAL	---	---	---	1.34	2.92	5.12	0.01	0.06	0.00	0.38	0.00	0.02

11070263 UNNAMED CREEK TRIBUTARY TO PERRIS RESERVOIR NEAR MORENO VALLEY, CA

LOCATION.--Lat 33°52'53", long 117°10'10", in NW 1/4 SW 1/4 sec.26, T.3 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on left bank 2.0 mi south of Moreno Valley.

DRAINAGE AREA.--0.46 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to September 1991 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,680 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 0.40 ft³/s, Feb. 17, 1990, gage height, 1.04 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 0.36 ft³/s, Mar. 27, gage height, 1.03 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.05	.02	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.03	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.001	.002	.003	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.01	.05	.02	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.06	.1	.2	.00	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.30 MEAN .001 MAX .11 MIN .00 AC-FT .6
WTR YR 1991 TOTAL 0.18 MEAN .000 MAX .05 MIN .00 AC-FT .4

SANTA ANA RIVER BASIN

11070263 UNNAMED CREEK TRIBUTARY TO PERRIS RESERVOIR NEAR MORENO VALLEY, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1990 to September 1991 (discontinued).

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 18, 1990.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.34 in, Feb. 27, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.34 in, Feb. 27; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.82	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.73	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.33	.00	.12	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.01
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.42	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.28	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
19	.04	.13	.00	.00	.00	.58	.00	.00	.00	.00	.00	.00
20	.00	.17	.00	.00	.00	1.14	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.35	.00	.00	.00	.00	.00	.00
26	.00	.08	.00	.00	.00	.89	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	1.34	.63	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.43	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.14	.00	---
TOTAL	0.04	0.38	0.00	1.48	1.77	5.20	0.00	0.01	0.00	0.14	0.00	0.01

WTR YR 1991 TOTAL 9.03

11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA

LOCATION.--Lat 33°48'04", long 117°12'19", in SW 1/4 SW 1/4 sec.21, T.4 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on right bank 1.9 mi northeast of Perris and 2.0 mi upstream from San Jacinto River.

DRAINAGE AREA.--93.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to September 1975, October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,410 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1969 to September 1975, at same site at different datum.

REMARKS.--No estimated daily discharges. Records good. Some regulation by percolation basins upstream from station. Some pumping for irrigation upstream from station.

AVERAGE DISCHARGE.--8 years (water years 1970-75, 1990-91), 2.15 ft³/s, 1,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,160 ft³/s, Mar. 27, 1991, gage height, 6.17 ft, from rating curve extended above 200 ft³/s on basis of critical-depth computation; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1969, reached a discharge of 4,840 ft³/s, gage height, 6.7 ft, from floodmarks, on basis of slope-area measurement by Riverside County Flood Control District.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s, (revised), and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 27	2400	1,540	5.20	Mar. 27	0245	*2,160	*6.17

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	662	.04	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	58	.01	.00	.00	.00	.00	.00
3	.00	.00	.00	89	.00	1.0	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	176	.00	.06	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	44	.00	13	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.48	.00	.14	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	44	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	7.5	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.22	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	34	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	16	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.56	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.15	.00	.73	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.39	.00	.07	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	5.5	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	11	.00	82	.00	.00	.00	.00	.00	.00
20	.00	11	.00	1.1	.00	310	.00	.00	.00	.00	.00	.00
21	.00	.53	.00	1.0	.00	89	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.20	.00	2.3	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	36	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	90	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	240	777	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	508	20	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.15	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.02	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.10	.00	---
TOTAL	0.00	11.53	0.00	380.56	748.00	2192.13	0.05	0.00	0.00	0.10	0.00	0.00
MEAN	.000	.38	.000	12.3	26.7	70.7	.002	.000	.000	.003	.000	.000
MAX	.00	11	.00	176	508	777	.04	.00	.00	.10	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	23	.00	755	1480	4350	.1	.00	.00	.2	.00	.00

CAL YR 1990 TOTAL 516.03 MEAN 1.41 MAX 178 MIN .00 AC-FT 1020
WTR YR 1991 TOTAL 3332.37 MEAN 9.13 MAX 777 MIN .00 AC-FT 6610

11070270 FERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR FERRIS, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--October 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Oct. 17, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.83 in, Feb. 27, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.83 in, Feb. 27; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.14	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.80	.00	.00	.01	.00	.00	.00	.00	.00
4	.00	.00	.00	.14	.00	.14	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.33	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.01	.00	.00	.00	.23	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.05	.00	.01	.00	.00	.00	.08
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.02	.00	.00	.09	.00	.00	.00	.00	.00	.00
16	.00	.00	.01	.00	.00	.01	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
19	.00	.21	.00	.00	.00	.57	.00	.00	.00	.00	.00	.00
20	.00	.28	.00	.00	.00	1.35	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.42	.00	.00	.00	.00	.00	.00
26	.00	.01	.00	.00	.00	1.10	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	1.83	.93	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	1.03	.01	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.08	.00	---
TOTAL	0.00	0.61	0.03	1.29	2.86	6.16	0.01	0.24	0.00	0.08	0.00	0.08
CAL YR 1990	TOTAL		5.55									
WTR YR 1991	TOTAL		11.36									

11070500 SAN JACINTO RIVER NEAR ELSINORE, CA

LOCATION.--Lat 33°39'51", long 117°17'35", in SE 1/4 NE 1/4 sec.9, T.6 S., R.4 W., Riverside County, Hydrologic Unit 18070203, on right bank 2.0 mi east of Elsinore, 2.1 mi downstream from Railroad Canyon Dam, and 36 mi downstream from Lake Hemet.

DRAINAGE AREA.--723 mi².

PERIOD OF RECORD.--January 1916 to current year. Monthly figures 1927-50, adjusted for diversion, published in WSP 1315-B.

REVISED RECORDS.--WDR CA-72-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,270 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Feb. 13, 1916, nonrecording gage at site 0.7 mi downstream at different datum. Feb. 13, 1916, to Oct. 27, 1921, nonrecording gage at present site, at different datum.

REMARKS.--No estimated daily discharges. Records fair. Flow partly regulated by Lake Hemet, capacity 13,500 acre-ft, and since 1928 by Railroad Canyon Reservoir, capacity, 12,000 acre-ft, 2.1 mi upstream from station. Diversions for irrigation and domestic use upstream from Railroad Canyon Reservoir. Temescal Water Co. diverted 145 acre-ft during the current year from Railroad Canyon Reservoir for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s, Feb. 17, 1927, gage height, 11.8 ft, from rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,670 ft³/s, Mar. 27, gage height, 9.33 ft; no flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.58	.77	1.2	1.1	555	16	1.1	.72	.26	.25	.23
2	.61	.59	.87	1.2	1.0	695	13	1.1	.72	.28	.17	.25
3	.61	.51	.98	1.5	1.0	182	10	1.0	.68	.32	.13	.34
4	.57	.49	.93	1.9	1.1	50	8.7	1.0	.70	.27	.12	.32
5	.67	.57	.90	1.4	1.1	26	7.8	.92	.59	.24	.09	.39
6	.66	.67	.87	1.4	1.1	21	7.0	.85	.55	.18	.11	.45
7	.65	.61	.84	1.4	1.0	12	6.0	1.0	.47	.20	.11	.41
8	.64	.62	.82	1.4	.93	7.5	5.7	.90	.47	.18	.04	.39
9	.54	.61	.78	1.7	.88	6.1	5.1	1.1	.47	.19	.00	.37
10	.50	.58	.79	1.8	.83	5.1	4.5	1.1	.45	.26	.00	.48
11	.53	.54	.88	1.8	.87	5.0	6.0	1.0	.48	.25	.00	.51
12	.51	.55	1.1	1.3	.91	4.9	3.8	.83	.44	.24	.00	.50
13	.47	.61	.88	1.3	.95	4.5	2.9	.84	.40	.21	.00	.50
14	.49	.75	.79	1.3	.90	9.1	2.7	.75	.39	.20	.00	.54
15	.65	.75	.75	1.3	.85	11	2.5	.69	.37	.17	.06	.50
16	.74	.66	.77	1.3	.80	8.6	2.5	.62	.33	.24	.10	.43
17	.64	.65	.81	1.3	.78	7.4	2.2	.59	.26	.28	.13	.41
18	.65	.61	.81	1.3	.84	6.0	2.2	.60	.24	.38	.04	.42
19	.63	.67	.85	1.3	.91	41	2.0	.58	.28	.40	.13	.45
20	.56	.93	.88	1.2	.90	355	1.9	.57	.29	.36	.36	.55
21	.45	.79	.92	1.2	.90	494	1.7	.65	.27	.31	.37	.57
22	.56	.74	.91	1.2	.90	111	1.7	.67	.28	.22	.38	.47
23	.68	.67	.95	1.2	.92	26	1.7	.60	.28	.16	.35	.35
24	.64	.74	1.0	1.1	.88	12	1.6	.56	.30	.08	.45	.39
25	.71	.75	1.0	.99	.92	11	1.5	.52	.31	.16	.38	.45
26	.65	.72	1.3	.95	1.0	58	1.4	.48	.32	.16	.28	.54
27	.48	.82	1.4	1.1	1.4	1450	1.4	.56	.33	.05	.31	.50
28	.43	.85	1.2	1.1	8.9	503	1.2	.72	.30	.01	.35	.42
29	.42	.85	1.2	1.1	---	121	1.3	.76	.33	.00	.35	.40
30	.50	.83	1.0	1.1	---	37	1.2	.74	.25	.00	.33	.37
31	.54	---	1.1	1.1	---	21	---	.75	---	.14	.25	---
TOTAL	17.88	20.31	29.05	40.44	34.57	4856.2	127.2	24.15	12.27	6.40	5.64	12.90
MEAN	.58	.68	.94	1.30	1.23	157	4.24	.78	.41	.21	.18	.43
MAX	.74	.93	1.4	1.9	8.9	1450	16	1.1	.72	.40	.45	.57
MIN	.42	.49	.75	.95	.78	4.5	1.2	.48	.24	.00	.00	.23
AC-FT	35	40	58	80	69	9630	252	48	24	13	11	26

CAL YR 1990 TOTAL 278.22 MEAN .76 MAX 3.1 MIN .12 AC-FT 552
WTR YR 1991 TOTAL 5187.01 MEAN 14.2 MAX 1450 MIN .00 AC-FT 10290

11072100 TEMESCAL CREEK ABOVE MAIN STREET, AT CORONA, CA

LOCATION.--Lat 33°53'21", long 117°33'43", in La Sierra Grant, Riverside County, Hydrologic Unit 18070203, on right bank 500 ft upstream from Main Street bridge in Corona and 1.5 mi upstream from topographic boundary of Prado Flood control basin.

DRAINAGE AREA.--224 mi², excludes 768 mi² above Lake Elsinore.

PERIOD OF RECORD.--December 1967 to September 1974, December 1980 to July 1983, February 1984 to current year.

GAGE.--Water-stage recorder and concrete-lined flood control channel. Elevation of gage is 600 ft above National Geodetic Vertical Datum of 1929, from topographic map. December 1967 to September 1974, water-stage recorder at site 1.2 mi downstream at different datum. December 1980 to July 1983 at site 500 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records poor. Flow regulated by several small storage reservoirs. Many diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--7 years, (water years 1985-91), 11.0 ft³/s, 7,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,850 ft³/s, Feb. 25, 1969, gage height, 8.17 ft, from floodmark, at old site 1.2 mi downstream on basis of slope-area measurement of peak flow; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,730 ft³/s, Mar. 27, gage height, 5.22 ft; minimum daily, 1.6 ft³/s, Mar. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	12	13	8.6	20	505	2.3	4.7	20	12	13	15
2	6.7	15	13	14	25	18	2.2	4.1	18	13	14	15
3	5.9	13	13	177	27	7.9	2.1	3.2	18	13	13	15
4	7.3	14	13	63	28	3.8	2.1	7.9	22	14	13	13
5	11	16	16	11	27	16	2.1	7.9	20	14	13	14
6	14	9.3	15	11	17	2.5	2.2	11	21	13	10	13
7	18	15	15	8.7	5.5	2.6	2.1	15	19	13	2.8	15
8	15	12	15	8.3	11	2.3	2.3	18	18	12	5.6	14
9	16	11	9.3	80	23	2.0	2.7	20	18	13	14	15
10	17	11	4.4	7.8	25	2.3	2.1	16	18	15	13	16
11	19	10	4.7	7.9	33	11	2.8	3.9	18	15	14	17
12	13	12	5.3	7.5	18	2.8	2.0	4.6	15	16	14	13
13	12	12	7.2	8.3	13	29	2.4	5.4	15	18	14	4.5
14	13	13	14	8.3	21	2.3	2.2	7.4	15	16	14	3.7
15	13	15	17	8.5	20	9.2	2.5	11	18	15	15	3.5
16	12	14	15	8.7	22	2.4	2.6	13	17	14	15	8.6
17	12	14	14	8.5	21	1.6	2.8	14	13	14	15	18
18	13	13	16	8.6	18	1.7	2.9	15	7.7	14	15	17
19	12	20	19	10	24	107	3.4	11	8.1	14	16	17
20	12	94	19	9.7	22	165	2.9	17	4.7	14	16	17
21	11	12	19	11	23	18	2.9	17	2.1	13	16	17
22	12	12	24	11	23	2.1	3.0	17	6.7	12	16	18
23	14	11	27	11	21	1.8	3.0	18	13	11	16	17
24	15	12	18	12	21	1.8	2.8	20	12	11	16	16
25	16	13	4.1	12	19	55	2.1	21	11	14	17	15
26	16	15	9.8	13	18	127	3.6	22	13	13	17	17
27	16	9.3	24	13	367	518	5.6	20	11	13	16	20
28	15	9.5	23	14	630	71	5.2	21	8.0	13	17	15
29	14	9.7	25	15	---	14	5.2	24	10	13	16	15
30	14	11	27	19	---	4.6	4.6	22	11	13	15	14
31	14	---	21	20	---	2.5	---	20	---	11	14	---
TOTAL	404.0	459.8	479.8	626.4	1542.5	1710.2	86.7	432.1	421.3	419	435.4	428.3
MEAN	13.0	15.3	15.5	20.2	55.1	55.2	2.89	13.9	14.0	13.5	14.0	14.3
MAX	19	94	27	177	630	518	5.6	24	22	18	17	20
MIN	5.1	9.3	4.1	7.5	5.5	1.6	2.0	3.2	2.1	11	2.8	3.5
AC-FT	801	912	952	1240	3060	3390	172	857	836	831	864	850
CAL YR 1990	TOTAL	4105.9	MEAN	11.2	MAX	323	MIN	2.0	AC-FT	8140		
WTR YR 1991	TOTAL	7445.5	MEAN	20.4	MAX	630	MIN	1.6	AC-FT	14770		

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA

LOCATION.--Lat 34°00'14", long 117°43'34", in Santa Ana del Chino Grant, San Bernardino County, Hydrologic Unit 18070203, on right bank 300 ft downstream from Schaefer Avenue, 0.8 mi downstream from San Antonio Creek, and 1.5 mi southwest of Chino.

DRAINAGE AREA.--48.9 mi².

PERIOD OF RECORD.--October 1969 to current year.

REVISED RECORDS.--WDR CA-84-1: 1983(M).

GAGE.--Water-stage recorder. Concrete dikes formed low-water control from October 1975 to Apr. 16, 1991. Elevation of gage is 685 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow mostly regulated by San Antonio flood-control reservoir, capacity, 7,700 acre-ft. Natural streamflow affected by extensive ground-water withdrawals, diversions for power, domestic use, irrigation, and return flow from irrigated areas. California Water Project reported no releases during the year to the basin via San Antonio Creek from Rialto Pipeline below San Antonio Dam at a site 10 mi upstream. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s, Feb. 27, 1983, gage height, 10.32 ft, from rating curve extended above 560 ft³/s on basis of slope-conveyance study; no flow May 21, June 30, July 1, Oct. 30, Nov. 3, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 9.23 ft, present datum, discharge, 9,200 ft³/s, on basis of contracted-opening measurement at site 6.1 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 956 ft³/s, Jan. 4, gage height, 6.25 ft; minimum daily, 0.48 ft³/s, June 16, July 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.2	.83	.83	.98	290	2.3	.72	.73	.67	.62	2.1
2	2.0	1.4	.83	1.6	.83	2.7	.96	.69	.71	.63	.63	2.1
3	1.3	.90	.83	117	.83	1.2	.96	.74	.75	.54	.58	1.5
4	1.6	.91	1.2	217	.91	18	1.3	.62	.77	.55	.55	.61
5	1.2	.93	1.2	16	1.2	6.9	1.1	.80	.71	.54	.58	1.5
6	1.0	1.1	.83	1.1	1.1	.98	1.1	.85	.74	.55	.68	.93
7	1.0	.96	.91	1.0	.86	.99	1.1	.72	.89	.55	.67	.63
8	1.2	.96	.96	.94	.83	.98	.99	.89	.59	.83	.73	1.4
9	.92	1.0	.84	65	.91	.96	.96	.79	.62	.63	.66	1.4
10	1.0	.96	1.0	1.1	.96	.96	.96	.78	.90	.56	.60	.73
11	1.0	1.0	1.1	.83	1.0	8.0	.96	.68	.71	.57	.59	.67
12	1.1	1.2	3.8	.72	.87	.82	.96	.73	.72	.64	.64	.58
13	1.0	1.2	1.2	.72	.97	58	.96	.93	.64	.58	.89	.59
14	.96	1.0	.88	.72	.96	1.5	.96	1.0	.80	.55	.71	1.2
15	1.1	1.1	.82	.77	.96	1.1	.96	.91	1.7	.59	.67	3.4
16	1.2	1.5	.72	.72	.93	1.4	1.0	.77	.48	.57	.78	2.1
17	1.3	1.1	1.1	.72	.86	.83	.83	.88	.93	.79	.60	.70
18	1.1	.96	1.1	.72	.85	.83	.83	.66	1.0	.78	.58	.62
19	1.4	11	.85	.78	.84	143	.83	.66	1.3	.78	.69	.63
20	1.0	23	1.0	.83	1.0	153	.83	.68	1.1	.75	.73	.75
21	.99	.89	1.8	.95	.98	1.5	1.0	.67	1.2	.73	.73	.61
22	.97	1.6	2.6	.90	.83	.97	.83	.75	1.1	.76	.78	.55
23	1.3	.83	3.2	1.3	.83	.86	.83	.73	.54	.86	.75	.75
24	1.1	.94	3.8	1.2	.83	.83	.83	.67	.96	.89	.72	.61
25	1.2	.84	1.5	.96	.90	113	1.3	.66	1.0	.93	.65	.74
26	1.2	10	2.1	.87	.85	116	.93	.65	.58	.57	.74	1.3
27	1.1	.83	1.6	.83	264	205	.96	.67	.55	.54	.79	.91
28	1.0	.83	1.5	.83	347	2.5	.80	.67	.67	.48	.91	.57
29	.96	.83	.80	1.2	---	1.6	.76	.73	.60	.52	.69	.57
30	.96	.83	1.1	2.5	---	1.1	.76	1.2	.61	.63	.74	.69
31	1.0	---	2.1	1.4	---	1.1	---	1.2	---	.63	.69	---
TOTAL	35.56	71.80	44.10	442.04	634.87	1136.61	29.85	24.10	24.60	20.19	21.37	31.44
MEAN	1.15	2.39	1.42	14.3	22.7	36.7	.99	.78	.82	.65	.69	1.05
MAX	2.0	23	3.8	217	347	290	2.3	1.2	1.7	.93	.91	3.4
MIN	.92	.83	.72	.72	.83	.82	.76	.62	.48	.48	.55	.55
AC-FT	71	142	87	877	1260	2250	59	48	49	40	42	62

CAL YR 1990 TOTAL 1681.60 MEAN 4.61 MAX 499 MIN .63 AC-FT 3340
WTR YR 1991 TOTAL 2516.53 MEAN 6.89 MAX 347 MIN .48 AC-FT 4990

11073495 CUCAMONGA CREEK NEAR MIRA LOMA, CA

LOCATION.--Lat 33°58'58", long 117°35'55", in SW 1/4 NE 1/4 sec.22, T.2 S., R.7 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 300 ft upstream from Merrill Avenue bridge and 4.6 mi west of Mira Loma.

DRAINAGE AREA.--75.8 mi².

PERIOD OF RECORD.--January 1968 to July 1977, January 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 660 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 1977 at site 100 ft downstream at different datum.

REMARKS.--Records poor. Channel is a trapezoidal concrete floodway; records for low and medium flows prior to July 31, 1977, are not equivalent. Chino Basin Municipal Water District Tertiary Plant No. 1 began discharging effluent 1.5 mi upstream from station on May 8, 1985. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--8 years (water years 1969-76), 2.74 ft³/s, 1,990 acre-ft/yr; 5 years (water years 1980-84), 19.3 ft³/s, 13,980 acre-ft/yr; 7 years (water years 1985-91), 29.8 ft³/s, 21,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft³/s, Feb. 27, 1983, gage height, 7.85 ft, from floodmark on basis of slope-conveyance study of peak flow; prior to operation of Plant No. 1, no flow for most of some years; minimum daily, since 1985, 2.5 ft³/s, June 6, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,010 ft³/s, Mar. 1, gage height, 4.18 ft, minimum daily, 12 ft³/s, Apr. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	20	23	31	18	e814	27	20	32	19	29	34
2	30	22	27	28	21	e122	23	25	36	21	35	36
3	29	23	26	95	23	72	27	23	35	17	33	45
4	26	25	24	329	22	60	23	23	34	20	27	40
5	28	23	22	114	19	60	21	27	35	36	29	58
6	28	21	24	36	21	34	20	27	33	42	27	36
7	31	18	25	32	20	33	22	29	32	32	31	30
8	29	23	26	32	18	30	21	34	35	32	28	33
9	28	24	23	44	18	27	23	26	34	33	34	33
10	28	24	24	25	19	19	22	36	37	40	37	33
11	26	28	21	20	27	45	22	43	35	34	34	29
12	28	28	18	19	20	29	19	33	31	28	34	31
13	26	26	20	21	19	91	20	33	25	29	34	36
14	27	28	21	18	17	39	22	32	28	27	35	37
15	30	27	22	19	16	26	23	26	28	22	35	38
16	28	29	24	16	18	25	22	27	28	33	33	45
17	28	30	23	14	18	24	22	27	27	31	30	39
18	25	29	22	17	20	28	21	30	24	30	32	40
19	26	34	23	17	23	191	21	32	22	37	35	38
20	27	62	21	19	19	250	17	31	26	35	38	38
21	26	32	23	19	18	45	21	31	25	33	37	37
22	27	31	22	19	21	31	19	31	24	36	39	38
23	25	26	23	18	20	24	12	27	21	35	38	37
24	26	33	23	21	22	21	20	27	24	38	40	35
25	27	27	25	22	20	111	22	30	33	35	39	39
26	26	63	22	20	18	173	17	25	35	38	41	51
27	28	38	19	22	303	540	19	27	33	41	39	49
28	30	26	22	19	682	107	19	31	24	38	36	49
29	34	24	22	18	---	40	22	33	20	39	38	56
30	30	23	24	21	---	32	23	34	18	35	38	61
31	26	---	28	18	---	33	---	34	---	36	39	---
TOTAL	865	867	712	1163	1500	3176	632	914	874	1002	1074	1201
MEAN	27.9	28.9	23.0	37.5	53.6	102	21.1	29.5	29.1	32.3	34.6	40.0
MAX	34	63	28	329	682	814	27	43	37	42	41	61
MIN	25	18	18	14	16	19	12	20	18	17	27	29
AC-FT	1720	1720	1410	2310	2980	6300	1250	1810	1730	1990	2130	2380

CAL YR 1990 TOTAL 12190 MEAN 33.4 MAX 780 MIN 11 AC-FT 24180
WTR YR 1991 TOTAL 13980 MEAN 38.3 MAX 814 MIN 12 AC-FT 27730

e Estimated.

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA
(National stream-quality accounting network station)

LOCATION.--Lat 33°53'00", long 117°38'40", in La Sierra Grant, Riverside County, Hydrologic Unit 18070203, on left bank of outlet channel, 2,500 ft downstream from axis of Prado Dam, and 4.5 mi west of Corona.

DRAINAGE AREA.--1,490 mi², excludes 768 mi² above Lake Elsinore.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1930 to November 1939 (irrigation seasons only), March 1940 to current year. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.--Water-stage recorder and concrete control since August 1944. Datum of gage is approximately 449 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 18, 1940, at about same site at various datums.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1940 by Prado flood-control reservoir, capacity, 196,200 acre-ft. Natural streamflow affected by extensive ground-water withdrawals, diversion for irrigation, and return flow from irrigated areas. During the current year, no California Water Project releases were made. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,440 ft³/s, Feb. 21, 1980, gage height, 6.88 ft; minimum daily, 2.4 ft³/s, July 29 to Aug. 3, Sept. 20, 1978 (result of gate closure).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 100,000 ft³/s, on basis of slope-area measurement of peak flow at site 2.5 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,680 ft³/s, Mar. 2, gage height, 6.12 ft; minimum daily, 100 ft³/s, Sept. 26, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	148	180	191	207	3160	498	184	172	153	142	120
2	146	151	179	185	205	3490	493	185	170	153	137	113
3	144	151	181	211	207	3000	491	187	172	153	140	118
4	143	152	175	285	217	2000	489	183	171	157	135	119
5	141	159	178	286	201	409	494	178	165	151	130	126
6	138	154	180	292	202	474	502	168	163	142	139	126
7	148	140	179	369	199	529	499	165	165	144	131	127
8	144	152	180	372	195	518	495	170	167	148	121	126
9	136	153	181	299	193	462	490	170	180	148	127	128
10	137	153	178	339	195	437	487	174	170	151	126	129
11	136	153	174	385	197	492	484	194	169	152	119	130
12	142	154	164	381	202	476	490	176	170	147	122	129
13	143	154	177	375	196	323	500	172	168	142	125	129
14	147	159	179	368	195	345	497	179	170	139	128	132
15	151	166	183	362	196	332	492	174	176	136	129	133
16	153	163	189	344	193	446	483	171	176	135	123	131
17	151	163	188	330	195	507	498	175	170	137	139	132
18	151	165	186	322	195	301	512	178	169	142	129	131
19	158	184	193	311	196	404	504	184	178	147	125	130
20	165	272	192	297	199	371	500	195	163	144	125	129
21	159	251	192	272	198	504	495	185	157	142	126	125
22	160	206	194	231	199	527	489	189	158	141	121	124
23	153	188	194	205	197	522	489	193	159	141	118	125
24	150	182	193	202	199	519	485	189	160	143	120	120
25	147	176	192	202	198	521	480	180	174	144	128	112
26	143	210	186	202	195	526	475	175	171	143	130	100
27	143	183	178	202	184	2360	422	169	171	137	120	105
28	146	174	185	201	1070	3440	239	183	167	135	117	100
29	148	173	187	199	---	2910	198	181	160	137	116	113
30	144	178	186	199	---	600	191	184	157	138	116	103
31	150	---	189	203	---	499	---	185	---	142	127	---
TOTAL	4562	5167	5692	8622	6425	31404	13861	5575	5038	4464	3931	3665
MEAN	147	172	184	278	229	1013	462	180	168	144	127	122
MAX	165	272	194	385	1070	3490	512	195	180	157	142	133
MIN	136	140	164	185	184	301	191	165	157	135	116	100
AC-FT	9050	10250	11290	17100	12740	62290	27490	11060	9990	8850	7800	7270

CAL YR 1990 TOTAL 71529 MEAN 196 MAX 1700 MIN 115 AC-FT 141900
WTR YR 1991 TOTAL 98406 MEAN 270 MAX 3490 MIN 100 AC-FT 195200

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.
 CHEMICAL DATA: Water years 1967 to current year.
 BIOLOGICAL DATA: Water years 1975-81.
 SPECIFIC CONDUCTANCE: Water years 1970 to current year.
 WATER TEMPERATURE: Water years 1970 to current year.
 SEDIMENT DATA: Water years 1974 to current year.

PERIOD OF DAILY RECORD.--
 CHLORIDE: October 1970 to September 1971.
 SPECIFIC CONDUCTANCE: October 1969 to current year.
 WATER TEMPERATURE: October 1969 to current year.
 SUSPENDED-SEDIMENT DISCHARGE: October 1973 to June 1982.

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperature since October 1969.

EXTREMES FOR PERIOD OF DAILY RECORD.--
 SPECIFIC CONDUCTANCE: Maximum recorded, 1,830 microsiemens, Apr. 30, 1971; minimum recorded, 220 microsiemens, Feb. 20, 1978.
 WATER TEMPERATURE: Maximum recorded, 36.0 °C, Sept. 4, 1972, Sept. 8, 1984; minimum recorded, 2.5 °C, Dec. 30, 1969.
 SEDIMENT CONCENTRATION: Maximum daily mean, 2,870 mg/L, Mar. 5, 1978; minimum daily mean, 3 mg/L, Apr. 2, 1980, and several days during 1982.
 SEDIMENT LOAD: Maximum daily, 18,900 tons, Mar. 5, 1978; minimum daily, 0.58 ton, Sept. 20, 1978.

EXTREMES FOR CURRENT YEAR.--
 SPECIFIC CONDUCTANCE: Maximum recorded, 1,220 microsiemens, Nov. 20; minimum recorded, 402 microsiemens, Mar. 2.
 WATER TEMPERATURE: Maximum recorded, 26.5 °C, June 20, Aug. 13; minimum recorded, 7.0 °C, Dec. 23, 25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED SATUR-ATION (%)	COLI-FORM, FECAL, UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CaCO3)
OCT												
11...	1310	138	1170	--	18.0	--	--	--	--	--	--	--
24...	1050	154	1090	--	17.0	--	--	--	--	--	--	--
NOV												
01...	1130	148	1100	--	18.0	--	--	--	--	--	--	--
28...	1145	177	1100	8.0	11.5	8.0	750	9.9	93	2000	510	300
DEC												
20...	1400	187	1120	--	12.0	--	--	--	--	--	--	--
JAN												
02...	1250	182	1080	--	12.0	--	--	--	--	--	--	--
24...	1145	207	1130	8.0	10.5	18	750	10.3	94	3500	1100	310
FEB												
07...	1240	197	1080	--	14.5	--	--	--	--	--	--	--
20...	1200	195	1090	--	14.5	--	--	--	--	--	--	--
MAR												
01...	1715	2890	--	--	13.0	--	--	--	--	--	--	--
26...	1315	492	613	7.7	12.5	32	740	9.8	95	66	72	180
APR												
08...	1330	490	714	--	15.5	--	--	--	--	--	--	--
18...	1150	506	858	--	18.0	--	--	--	--	--	--	--
MAY												
15...	1115	172	1050	--	18.5	--	--	--	--	--	--	--
31...	1115	202	1040	8.1	18.0	33	740	8.8	96	800	1300	280
JUN												
10...	1245	175	1040	--	22.0	--	--	--	--	--	--	--
27...	1400	170	1010	--	22.0	--	--	--	--	--	--	--
JUL												
08...	1230	146	1010	--	23.0	--	--	--	--	--	--	--
30...	1140	141	1010	8.0	21.5	27	745	8.3	97	1000	1100	280
AUG												
05...	1200	126	1000	--	22.0	--	--	--	--	--	--	--
13...	1230	122	995	--	24.5	--	--	--	--	--	--	--
SEP												
04...	1315	118	1000	--	23.5	--	--	--	--	--	--	--
25...	1245	127	997	8.0	23.0	23	745	8.0	96	780	890	270

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV 28...	89	84	22	110	43	3	11	258	0	212	120	130
JAN 24...	89	85	23	110	43	3	11	266	0	218	120	130
MAR 26...	32	52	12	51	36	2	13	180	0	148	67	62
MAY 31...	79	82	19	95	41	2	9.0	250	0	205	100	110
JUL 30...	83	81	18	99	43	3	9.5	236	0	194	130	120
SEP 25...	74	77	19	95	42	3	10	240	0	196	130	110

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 11...	--	--	700	--	--	--	--	--	--	--	--	--
24...	--	--	652	--	--	--	--	--	--	--	--	--
NOV 01...	--	--	670	--	--	--	--	--	--	--	--	--
28...	0.50	22	646	671	0.88	0.060	0.060	8.80	8.30	0.350	0.350	1.5
DEC 20...	--	--	660	--	--	--	--	--	--	--	--	--
JAN 02...	--	--	676	--	--	--	--	--	--	--	--	--
24...	0.40	21	695	676	0.95	0.060	0.060	8.20	8.20	0.790	0.830	1.9
FEB 07...	--	--	666	--	--	--	--	--	--	--	--	--
20...	--	--	700	--	--	--	--	--	--	--	--	--
MAR 26...	0.50	13	366	376	0.50	0.150	0.130	2.60	2.70	0.610	0.520	1.8
APR 08...	--	--	443	--	--	--	--	--	--	--	--	--
18...	--	--	518	--	--	--	--	--	--	--	--	--
MAY 31...	0.50	25	631	616	0.86	0.110	0.100	11.0	11.0	0.150	0.150	1.5
JUN 10...	--	--	626	--	--	--	--	--	--	--	--	--
27...	--	--	608	--	--	--	--	--	--	--	--	--
JUL 08...	--	--	643	--	--	--	--	--	--	--	--	--
30...	0.40	25	604	648	0.82	0.120	0.110	8.80	8.90	0.100	0.100	1.4
AUG 05...	--	--	619	--	--	--	--	--	--	--	--	--
13...	--	--	633	--	--	--	--	--	--	--	--	--
SEP 04...	--	--	600	--	--	--	--	--	--	--	--	--
25...	0.50	26	623	631	0.85	0.100	0.100	8.70	8.10	0.120	0.110	1.2

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV 28...	2.40	2.30	2.30	2.30	10	4	40	<0.5	<1.0	<1	<3	3
JAN 24...	2.70	2.30	2.20	2.30	<10	3	42	<0.5	<1.0	<1	<3	2
MAR 26...	1.30	1.30	1.10	1.20	30	2	41	<0.5	<1.0	<1	<3	3
MAY 31...	3.10	2.50	2.70	1.10	<10	3	42	<0.5	<1.0	<1	<3	3
JUL 30...	3.40	3.30	3.30	3.00	--	--	--	--	--	--	--	--
SEP 25...	3.40	3.30	3.30	3.20	--	--	--	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	VANADIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 28...	14	1	11	89	<0.1	<10	2	<1	<1.0	550	<6	12
JAN 24...	16	1	12	150	<0.1	<10	4	<1	<1.0	580	<6	9
MAR 26...	40	1	6	71	<0.1	<10	3	<1	<1.0	330	<6	29
MAY 31...	11	1	9	90	<0.1	<10	3	<1	<1.0	530	7	27

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESURE (MM HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, SATURATION (PERCENT)	SEDIMENT, PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
26...*	1245	1.53	25.0	619	7.7	12.5	740	9.8	95	20	100
26...*	1250	1.63	55.0	618	7.6	12.5	740	9.7	94	21	99
26...*	1255	1.73	72.0	610	7.7	12.5	740	9.8	95	23	98
26...*	1300	1.62	92.0	609	7.7	12.5	740	9.8	95	22	98
26...*	1305	1.66	112	611	7.6	12.5	740	9.7	94	19	99
26...*	1310	1.72	130	612	7.6	12.5	740	9.8	95	18	100
JUL											
30...*	1110	1.34	6.00	1000	8.0	21.5	745	8.3	97	82	95
30...*	1115	1.44	12.0	1010	8.0	21.5	745	8.3	97	91	93
30...*	1120	1.57	19.0	1010	8.0	21.5	745	8.3	97	91	94
30...*	1125	1.60	25.0	1010	8.0	21.5	745	8.3	97	96	95
30...*	1130	1.58	31.0	1010	8.0	21.5	745	8.3	97	94	95

* Instantaneous discharge at the time of cross-sectional measurements: Mar. 26, 492 ft³/s; July 30, 141 ft³/s.

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
28...	1145	177	11.5	31	15	87
JAN						
24...	1145	207	10.5	30	17	95
MAR						
01...	1715	2890	13.0	530	4140	64
26...	1315	492	12.5	26	35	93
MAY						
31...	1115	202	18.0	92	50	97
JUL						
30...	1140	141	21.5	85	32	98
SEP						
25...	1245	127	23.0	52	18	96

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH					
1	1060	1030	1100	1070	1100	1080	1090	1070	1090	1070	533	422				
2	1090	1040	1090	1070	1090	1060	1090	1070	1090	1070	442	402				
3	1120	1070	1100	1070	1100	1060	1090	832	1080	1060	451	411				
4	1100	1070	1090	1070	1100	1080	882	812	1100	1050	640	440				
5	1100	1090	1100	1060	1110	1080	875	774	1070	1050	539	479				
6	1100	1070	1110	1080	1110	1080	856	806	1070	1060	568	509				
7	1090	1060	1140	1090	1120	1090	818	787	1090	1050	607	508				
8	1100	1070	1110	1080	1110	1090	889	778	1100	1070	787	617				
9	1110	1090	1110	1080	1130	1100	900	840	1100	1070	796	666				
10	1120	1080	1150	1080	1120	1110	941	892	1100	1070	845	735				
11	1190	1110	1100	1080	1130	1100	933	862	1080	1060	845	784				
12	1150	1120	1110	1070	1110	1100	934	884	1080	1060	843	763				
13	1140	1110	1100	1070	1120	1080	966	895	1090	1070	912	543				
14	1120	1100	1100	1080	1110	1090	967	936	1100	1080	972	832				
15	1110	1080	1110	1080	1100	1090	998	957	1100	1080	891	851				
16	1110	1080	1110	1090	1120	1100	1050	999	1100	1080	841	780				
17	1110	1080	1110	1080	1110	1090	1080	1040	1090	1070	790	769				
18	1110	1090	1120	1080	1120	1090	1120	1080	1100	1070	848	789				
19	1110	1090	1100	1080	1110	1090	1140	1110	1100	1080	878	788				
20	1110	1080	1220	983	1120	1100	1160	1140	1100	1070	937	787				
21	1100	1080	1170	1110	1110	1090	1170	1150	1100	1080	826	766				
22	1090	1070	1130	1090	1100	1090	1160	1140	1110	1080	925	645				
23	1100	1070	1120	1090	1100	1090	1140	1130	1100	1070	635	584				
24	1100	1080	1120	1090	1100	1090	1150	1110	1100	1080	844	593				
25	1100	1070	1120	1080	1100	1090	1120	1100	1090	1070	603	592				
26	1090	1060	1090	934	1100	1080	1110	1090	1080	1070	623	602				
27	1100	1070	1110	1060	1100	1090	1110	1090	1070	914	694	613				
28	1090	1060	1150	1090	1100	1080	1110	1090	874	463	625	436				
29	1090	1060	1110	1080	1100	1080	1100	1080	---	---	478	456				
30	1090	1060	1100	1080	1100	1080	1110	1080	---	---	478	458				
31	1090	1070	---	---	1130	1070	1100	1080	---	---	471	451				
MONTH	1190	1030	1220	934	1130	1060	1170	774	1110	463	972	402				
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	483	461	664	563	1030	1020	1020	990	1010	990	999	975				
2	534	483	745	614	1040	1010	1010	992	1000	990	1000	970				
3	576	525	786	655	1040	1010	1030	995	1000	980	998	974				
4	578	546	767	657	1040	1020	1020	998	1010	970	1010	880				
5	690	578	719	648	1050	1020	1030	1000	1000	970	994	965				
6	661	610	680	619	1050	1020	1020	994	991	970	988	965				
7	693	642	691	640	1050	1020	1020	987	1000	981	1000	969				
8	733	693	752	652	1080	1020	1020	989	1020	992	1000	982				
9	752	733	743	653	1050	1030	1030	1000	1010	992	997	975				
10	780	751	1020	674	1040	1020	1030	1000	1000	973	991	969				
11	780	769	1000	805	1040	1020	1020	1000	1000	974	994	972				
12	807	778	947	696	1040	1010	1020	995	985	974	997	965				
13	835	796	938	738	1040	1010	1030	996	1000	975	1000	978				
14	874	835	1080	738	1020	1000	1030	1010	1000	978	1010	982				
15	872	852	1070	1040	1030	1000	1030	999	1000	972	1020	988				
16	862	841	1070	1040	1030	997	1020	991	1010	976	1000	972				
17	859	829	1060	1030	1030	998	1030	1000	1000	990	1000	972				
18	879	848	1050	1030	1020	999	1030	1010	1020	979	998	975				
19	890	859	1060	1030	1030	971	1030	1010	993	969	1000	969				
20	911	880	1040	1020	1040	1000	1030	1010	996	973	1030	972				
21	922	901	1040	1000	1030	1010	1030	1010	991	958	998	975				
22	943	922	1030	1020	1030	1010	1030	1010	995	962	1050	979				
23	964	943	1040	1010	1030	1010	1020	1000	989	957	1000	982				
24	965	945	1040	1010	1030	997	1030	1000	984	961	1010	975				
25	967	936	1040	1020	1010	988	1030	1000	988	959	1000	971				
26	958	937	1040	1020	1010	988	1020	1000	973	940	992	961				
27	938	689	1050	1020	1010	989	1040	1010	987	963	994	963				
28	669	520	1040	1020	1000	982	1040	1010	991	959	1010	975				
29	572	521	1030	1010	1020	994	1030	999	1000	963	997	976				
30	583	532	1030	1010	1020	987	1010	990	999	976	999	968				
31	---	---	1030	1010	---	---	1010	980	1020	971	---	---				
MONTH	967	461	1080	563	1080	971	1040	980	1020	940	1050	880				

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.0	20.5	18.5	17.0	14.5	11.5	13.0	9.0	15.0	11.5	14.0	13.0
2	21.5	20.5	17.0	15.0	14.5	11.5	13.5	10.5	14.5	11.5	14.0	13.5
3	23.0	20.0	16.0	14.5	14.5	11.5	14.0	12.5	15.5	12.0	13.5	13.5
4	23.0	20.0	16.0	13.0	14.5	11.5	13.5	13.0	16.0	12.5	14.0	13.5
5	23.0	19.5	16.5	13.0	14.5	11.5	14.0	13.5	17.0	13.5	14.0	13.5
6	22.0	19.0	15.5	14.0	15.0	12.0	14.5	14.0	17.5	14.0	14.0	13.5
7	22.0	19.5	15.0	13.0	15.0	13.0	14.0	14.0	17.5	13.5	14.5	13.5
8	21.0	18.0	15.5	12.5	14.5	11.5	14.0	14.0	17.0	13.5	15.0	14.0
9	20.5	17.5	16.5	13.5	14.5	11.0	14.0	13.5	17.5	13.0	14.5	14.0
10	20.0	16.5	17.5	14.5	14.5	11.0	13.5	13.0	17.0	13.0	14.5	14.5
11	19.5	16.0	17.0	14.5	15.0	12.0	13.0	12.5	17.5	13.5	15.0	14.5
12	20.5	17.0	17.5	15.5	15.0	14.0	13.0	12.5	17.5	14.5	15.0	14.5
13	20.0	17.5	17.5	15.0	15.0	13.5	13.0	12.5	17.5	14.5	15.0	14.5
14	20.5	18.5	17.0	14.5	14.0	11.5	13.5	12.5	18.0	14.0	14.5	14.0
15	20.5	18.5	17.0	14.5	13.5	11.0	13.5	12.5	17.5	15.5	14.5	14.0
16	20.5	19.0	17.0	14.5	13.5	11.5	13.5	13.0	17.0	16.0	14.0	14.0
17	21.0	19.0	18.0	16.0	13.0	10.0	13.0	12.5	17.5	15.5	14.5	13.5
18	21.0	19.0	17.0	15.5	12.5	10.0	13.0	12.5	17.0	14.0	14.5	13.5
19	21.0	20.0	16.5	15.5	13.0	11.0	13.0	12.5	17.5	13.5	14.0	13.5
20	20.0	18.0	16.5	15.5	12.0	10.5	14.0	12.5	17.5	13.0	15.0	10.5
21	19.0	17.0	16.5	14.5	10.5	9.5	14.0	13.5	17.5	14.0	14.0	13.5
22	19.0	16.0	16.0	13.5	9.5	7.5	14.0	11.5	17.5	14.0	13.5	13.0
23	19.0	16.0	16.5	13.5	9.0	7.0	13.5	10.5	17.5	14.0	13.0	12.5
24	19.5	16.5	16.5	13.0	10.0	7.5	14.0	10.5	18.0	14.5	13.0	12.5
25	19.5	16.5	16.0	13.5	10.5	7.0	14.0	11.5	17.5	14.5	13.5	13.0
26	19.5	16.5	16.0	13.5	11.0	8.0	14.5	12.0	18.0	15.0	13.5	13.0
27	19.5	16.5	14.0	11.5	12.0	9.5	14.5	11.5	17.0	15.0	14.0	13.0
28	19.5	17.0	14.0	11.0	11.5	8.5	13.5	11.5	14.5	13.5	13.5	12.0
29	19.5	17.0	14.5	12.0	12.5	10.5	14.5	11.5	---	---	12.5	12.0
30	19.0	16.5	14.5	11.5	12.0	9.5	14.0	11.0	---	---	12.5	11.5
31	18.5	16.5	---	---	11.5	8.5	14.5	10.5	---	---	12.0	11.5
MONTH	23.0	16.0	18.5	11.0	15.0	7.0	14.5	9.0	18.0	11.5	15.0	10.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	12.0	21.5	18.0	22.0	18.0	25.5	20.5	25.5	21.5	25.0	21.0
2	13.0	12.5	20.5	15.5	23.0	17.5	25.5	21.0	25.5	21.5	25.0	21.5
3	13.0	12.5	21.0	15.5	24.0	18.0	26.0	21.5	25.0	22.0	25.5	22.0
4	13.5	13.0	22.0	16.0	23.5	19.0	25.5	21.5	25.0	21.5	25.0	22.0
5	14.0	13.5	23.5	17.0	23.0	19.0	26.0	21.5	24.5	21.0	24.0	22.0
6	14.5	14.0	24.0	18.5	23.5	19.0	26.0	21.5	23.5	20.5	24.5	21.5
7	15.0	14.5	24.5	19.0	24.0	18.0	25.5	22.0	24.5	19.5	24.0	21.5
8	15.5	15.0	24.5	20.0	23.5	18.5	25.0	22.0	25.0	20.0	23.0	20.5
9	16.0	15.5	22.5	19.0	24.0	19.5	25.5	21.5	25.0	21.0	23.0	20.5
10	16.5	16.0	21.0	16.5	24.0	19.0	25.0	21.0	25.5	21.5	22.5	19.5
11	17.5	16.5	21.0	15.5	23.5	20.0	25.0	21.0	25.5	22.0	22.0	19.0
12	17.5	17.0	22.5	16.5	24.0	20.0	25.0	21.0	24.5	22.0	22.5	19.0
13	17.5	17.0	22.5	17.0	23.5	20.0	25.5	21.0	26.5	22.5	22.0	20.0
14	17.5	17.0	22.5	18.0	22.5	19.5	25.5	21.0	25.5	23.0	22.5	20.0
15	17.5	17.0	23.5	17.0	23.5	19.5	25.5	21.5	26.0	22.5	23.0	20.5
16	17.5	17.0	23.5	18.0	24.0	19.0	25.0	20.5	26.0	22.0	23.5	19.5
17	17.5	17.0	22.5	19.0	24.5	19.5	24.5	21.0	25.5	22.5	23.5	20.0
18	17.5	17.0	22.0	17.0	22.5	20.5	22.5	20.5	25.5	21.5	23.0	20.5
19	18.0	17.0	22.0	16.5	24.0	19.5	22.5	20.5	24.5	21.0	24.0	20.5
20	17.5	17.0	22.5	17.0	26.5	19.0	23.5	20.0	25.0	20.5	24.5	21.0
21	18.0	17.5	21.0	18.0	24.0	19.5	24.0	19.5	25.0	21.0	24.0	21.0
22	18.0	17.5	21.5	17.5	24.0	19.5	24.0	20.5	25.5	21.5	24.5	21.5
23	18.0	17.5	23.0	17.5	24.0	19.0	25.0	21.0	26.0	22.0	25.0	22.0
24	18.5	17.5	24.0	19.0	24.0	20.0	24.5	21.0	26.0	22.5	25.0	22.0
25	18.5	18.0	24.0	19.0	24.0	20.0	24.0	21.0	25.5	21.5	25.0	22.0
26	19.0	18.0	23.0	19.0	23.5	19.0	24.5	21.0	24.5	21.5	24.0	21.5
27	20.5	17.5	22.0	19.0	23.5	20.0	25.0	20.5	24.5	21.0	24.5	22.0
28	22.0	17.0	22.5	18.0	23.5	19.5	25.5	20.5	23.5	19.5	24.0	21.0
29	22.0	17.0	21.5	18.5	24.5	20.0	25.5	20.5	23.5	19.5	23.5	20.5
30	22.0	16.5	19.5	18.0	25.5	19.5	24.0	21.5	24.0	19.5	23.5	20.5
31	---	---	22.0	16.5	---	---	24.0	21.5	24.0	20.0	---	---
MONTH	22.0	12.0	24.5	15.5	26.5	17.5	26.0	19.5	26.5	19.5	25.5	19.0

11075720 CARBON CREEK BELOW CARBON CANYON DAM, CA

LOCATION.--Lat 33°54'48", long 117°50'30", in SW 1/4 NE 1/4 sec.17, T.3 S., R.9 W., Orange County, Hydrologic Unit 18070106, on right wall of outlet channel 250 ft downstream from toe of Carbon Canyon Dam and 2.4 mi northwest of Yorba Linda.

DRAINAGE AREA.--19.5 mi².

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR CA-88-1: 1983(M).

GAGE.--Water-stage recorder. Datum of gage is 396.35 ft, U.S. Army Corps of Engineers datum. Prior to Dec. 3, 1971, at datum 2.00 ft higher.

REMARKS.--Records fair except for discharges below 10 ft³/s, which are poor. Flow regulated by Carbon Canyon flood-control reservoir, capacity, 6,610 acre-ft. No diversion upstream from station. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--30 years, 0.98 ft³/s, 710 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 796 ft³/s, Mar. 1, 1983, gage height, 5.11 ft, present datum, from rating curve extended above 110 ft³/s on basis of optical current-meter measurement at 241 ft³/s and normal depth solution for discharge computation at gage height 4.27 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 492 ft³/s, Mar. 1, gage height, 4.25 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	e.00	133	e.05	e.00	e.00	.00	.00	.00
2	.00	.00	.00	.00	e.00	6.0	e.00	e.00	.00	.00	.00	.00
3	.00	.00	.00	.06	e.00	1.7	e.00	e.00	.00	.00	.00	.00
4	.00	.00	.00	2.2	e.00	1.1	e.00	e.00	.00	.00	.00	.00
5	.00	.00	.00	2.1	e.00	.70	e.00	e.00	.00	.00	.00	.00
6	.00	.00	.00	.67	e.00	.43	e.00	e.00	.00	.00	.00	.00
7	.00	.00	.00	e.00	e.00	.40	e.00	e.00	.00	.00	.00	.00
8	.00	.00	.00	e.00	e.00	.66	e.00	e.00	.00	.00	.00	.00
9	.00	.00	.00	1.9	e.00	.66	e.00	e.00	.00	.00	.00	.00
10	.00	.00	.00	1.2	e.00	.58	e.00	e.00	.00	.00	.00	.01
11	.00	.00	.00	.59	e.00	.28	e.00	e.00	.00	.00	.00	.01
12	.00	.00	.00	e.20	e.00	.02	e.00	e.00	.00	.00	.00	.00
13	.00	.00	.00	e.05	e.00	.03	e.00	e.00	.00	.00	.00	.00
14	.00	.00	.00	e.02	e.00	1.7	e.00	e.00	.00	.00	.00	.00
15	.00	.00	.00	e.00	e.00	.53	e.00	e.00	.00	.00	.00	.00
16	.00	.00	.04	e.00	e.00	.47	e.00	e.00	.00	.00	.00	.00
17	.00	.00	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
18	.00	.00	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
19	.00	.00	.00	e.00	e.00	29	e.00	e.00	.00	.00	.01	.00
20	.00	.01	.00	e.00	e.00	61	e.00	e.00	.00	.00	.00	.00
21	.00	.00	.00	e.00	e.00	3.7	e.00	e.00	.00	.00	.00	.00
22	.00	.00	.00	e.00	e.00	1.3	e.00	e.00	.00	.00	.00	.00
23	.00	.00	.00	e.00	e.00	.67	e.00	e.00	.00	.00	.00	.00
24	.00	.00	.00	e.00	e.00	.54	e.00	e.00	.00	.00	.00	.00
25	.00	.00	.00	e.00	e.00	.55	e.00	e.00	.00	.00	.00	.00
26	.00	.00	.00	e.00	e.00	7.0	e.00	e.00	.00	.00	.00	.00
27	.00	.00	.00	e.00	2.1	169	e.00	e.00	.00	.00	.00	.00
28	.00	.00	.00	e.00	78	4.8	e.00	e.00	.00	.00	.00	.00
29	.00	.00	.00	e.00	---	.95	e.00	e.00	.00	.00	.00	.00
30	.00	.00	.00	e.00	---	.73	e.00	e.00	.00	.00	.00	.00
31	.00	---	.00	e.00	---	e.30	---	e.00	---	.00	.00	---
TOTAL	0.00	0.01	0.04	8.99	80.10	427.80	0.05	0.00	0.00	0.00	0.01	0.02
MEAN	.000	.000	.001	.29	2.86	13.8	.002	.000	.000	.000	.000	.001
MAX	.00	.01	.04	2.2	.78	169	.05	.00	.00	.00	.01	.01
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.02	.08	18	159	849	.1	.00	.00	.00	.02	.04

CAL YR 1990 TOTAL 35.71 MEAN .098 MAX 32 MIN .00 AC-FT 71
WTR YR 1991 TOTAL 517.02 MEAN 1.42 MAX 169 MIN .00 AC-FT 1030

e Estimated.

11075800 SANTIAGO CREEK AT MODJESKA, CA

LOCATION.--Lat 33°42'46", long 117°38'39", in NE 1/4 NE 1/4 sec.30, T.5 S., R.7 W., Orange County, Hydrologic Unit 18070203, on right bank at Santiago Canyon Road bridge, 0.9 mi northwest of Modjeska, 1.0 mi downstream from Harding Creek, and 1.5 mi downstream from Modjeska Reservoir.
 DRAINAGE AREA.--13.0 mi².

PERIOD OF RECORD.--October 1961 to current year.
 REVISED RECORDS.--WDR CA-73-1: 1969. WDR CA-86-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,210 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 10, 1969, at site 0.6 mi upstream at datum approximately 48 ft higher. Sept. 10, 1969, to Feb. 6, 1985, at site 0.6 mi upstream at datum approximately 44 ft higher.

REMARKS.--Records fair. Slight regulation by Modjeska Reservoir on Harding Creek. Santiago County Water District diverts water at Modjeska Reservoir on Harding Creek. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--30 years, 7.03 ft³/s, 5,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft³/s, Feb. 25, 1969, gage height, 6.18 ft, site and datum then in use, from rating curve extended above 840 ft³/s on basis of slope-area measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*), from rating curve extended above 200 ft³/s, on basis of culvert computation of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1100	*274	*7.64	Mar. 27	0545	172	7.14

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	121	13	1.2	.30	.00	.00	.00
2	.00	.00	.00	.00	.00	46	9.7	1.1	.22	.00	.00	.00
3	.00	.00	.00	.00	.00	17	7.7	.93	.21	.00	.00	.00
4	.00	.00	.00	.00	.00	8.8	5.7	1.1	.16	.00	.00	.00
5	.00	.00	.00	.00	.00	6.5	4.6	.95	.17	e.00	.00	.00
6	.00	.00	.00	.00	.00	4.8	3.6	.82	.16	e.00	.00	.00
7	.00	.00	.00	.00	.00	3.8	3.2	.75	.14	e.00	.00	.00
8	.00	.00	.00	.00	.00	3.3	3.2	.76	.12	e.00	.00	.00
9	.00	.00	.00	.00	.00	3.0	2.5	.73	.11	e.00	.00	.00
10	.00	.00	.00	.00	.00	2.6	2.3	.72	.08	.00	.00	.00
11	.00	.00	.00	.00	.00	2.5	2.1	.73	.08	.00	.00	.00
12	.00	.00	.00	.00	.00	2.2	1.8	.72	.10	e.00	.00	.00
13	.00	.00	.00	.00	.00	2.5	1.8	.70	.11	e.00	.00	.00
14	.00	.00	.00	.00	.00	2.6	1.8	.62	.16	e.00	.00	.00
15	.00	.00	.00	.00	.00	2.5	2.0	.51	.13	e.00	.00	.00
16	.00	.00	.00	.00	.00	2.4	1.8	.53	.15	.00	.00	.00
17	.00	.00	.00	.00	.00	2.1	1.8	.53	.13	.00	.00	.00
18	.00	.00	.00	.00	.00	2.0	1.7	.41	.13	.00	.00	.00
19	.00	.00	.00	.00	.00	23	1.6	.41	.13	.00	.00	.00
20	.00	.00	.00	.00	.00	40	1.4	.44	.09	.00	.00	.00
21	.00	.00	.00	.00	.00	33	1.3	.47	.09	.00	.00	.00
22	.00	.00	.00	.00	.00	20	1.1	.48	.06	.00	.00	.00
23	.00	.00	.00	.00	.00	14	1.0	.36	.04	.00	.00	.00
24	.00	.00	.00	.00	.00	10	1.2	.19	.04	.00	.00	.00
25	.00	.00	.00	.00	.00	15	1.4	.18	.02	.00	.00	.00
26	.00	.00	.00	.00	.00	23	1.3	.20	.00	.00	.00	.00
27	.00	.00	.00	.00	1.2	116	1.2	.17	.00	.00	.00	.00
28	.00	.00	.00	.00	35	62	1.2	.19	.00	.00	.00	.00
29	.00	.00	.00	.00	---	41	.95	.21	.00	.00	.00	.00
30	.00	.00	.00	.00	---	29	1.1	.24	.00	.00	.00	.00
31	.00	---	.00	.00	---	19	---	.29	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	36.20	680.6	85.05	17.64	3.13	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	1.29	22.0	2.83	.57	.10	.000	.000	.000
MAX	.00	.00	.00	.00	35	121	13	1.2	.30	.00	.00	.00
MIN	.00	.00	.00	.00	.00	2.0	.95	.17	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	72	1350	169	35	6.2	.00	.00	.00

CAL YR 1990 TOTAL 167.75 MEAN .46 MAX 50 MIN .00 AC-FT 333
 WTR YR 1991 TOTAL 822.62 MEAN 2.25 MAX 121 MIN .00 AC-FT 1630

e Estimated.

11077500 SANTIAGO CREEK AT SANTA ANA, CA

LOCATION.--Lat 33°46'13", long 117°53'01", in SW 1/4 NW 1/4 sec.1, T.5 S., R.10 W., Orange County, Hydrologic Unit 18070203, on left bank 127 ft upstream from Bristol Street bridge at Santa Ana and 1,700 ft upstream from mouth at Santa Ana River.

DRAINAGE AREA.--98.6 mi².

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only October to December 1928, published in WSP 1315-B.

REVISED RECORDS.--WSP 1635: 1934, 1935(M), 1936. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 105.00 ft, Orange County Environmental Management Agency bench mark. Prior to Sept. 8, 1969, at site 0.1 mi upstream at different datum; Sept. 9, 1969, to July 21, 1976, at site 127 ft downstream at datum 2.66 ft lower.

REMARKS.--Records poor. Flow regulated since December 1931 by Santiago Reservoir, capacity, 25,000 acre-ft; since January 1963 by Villa Park flood-control reservoir, capacity, 15,500 acre-ft, and affected by intervening gravel pits. Diversions upstream from station by Irvine Company and Serrano and Carpenter Irrigation Districts. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--63 years, 4.62 ft³/s, 3,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,600 ft³/s, Feb. 25, 1969, gage height, 9.10 ft, site and datum then in use; maximum gage height, 9.85 ft, Jan. 16, 1952, site and datum then in use; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,100 ft³/s, Mar. 26, gage height, 4.86 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	85	.00	.00	e.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.31	.00	.00	e.00	.00	.00	.00
3	.00	.00	.00	5.9	.00	.00	.00	.00	e.00	.00	.00	.00
4	.00	.00	.00	.89	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	8.5	.09	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.06	.00	e.00	.00	.00	.00	.00
14	.00	.03	.00	.00	.00	.16	.00	e.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00
17	.00	.10	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00
18	.00	.85	.00	.00	.00	.24	.00	e.00	.00	.00	.00	.00
19	.00	.23	.00	.00	.00	.35	.00	e.00	.00	.00	.00	.00
20	.00	.13	.00	.00	.00	.57	.00	e.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.14	.00	e.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.15	.00	e.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.70	.00	e.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.139	.98	.00	e.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.97	.38	.00	e.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	e.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	e.00	.00	.00	.00	.00
31	.00	---	.31	.00	---	.00	---	e.00	---	.00	.00	---
TOTAL	0.00	1.34	0.31	15.29	236.09	361.29	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.045	.010	.49	8.43	11.7	.000	.000	.000	.000	.000	.000
MAX	.00	.85	.31	8.5	139	98	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	2.7	.6	30	468	717	.00	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 218.40 MEAN .60 MAX 125 MIN .00 AC-FT 433
WTR YR 1991 TOTAL 614.32 MEAN 1.68 MAX 139 MIN .00 AC-FT 1220

e Estimated.

11078000 SANTA ANA RIVER AT SANTA ANA, CA

LOCATION (REVISED).--Lat 33°45'04", long 117°54'27", in NW 1/4 SE 1/4 sec.10, T.5 S., R.10 W., Orange County, Hydrologic Unit 18070203, on right bank 850 ft upstream from Fifth Street Bridge in Santa Ana and 1.6 mi downstream from Santiago Creek.

DRAINAGE AREA.--1,700 mi², excludes 768 mi² above Lake Elsinore.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1923 to September 1989, October 1990 to September 1991. Discharge measurements only, October 1989 to September 1990.

REVISED RECORDS.--WSP 1635: 1940(M), 1944. WDR CA-74-1: Drainage area. WDR CA-79-1: 1978(M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 70 ft, above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1990, to Feb. 12, 1991 at site 900 ft downstream at different datum. See WDR CA-90-1 for complete history of location and datum changes.

REMARKS.--Records fair above 200 ft³/s, and poor below. Natural flow affected by ground-water withdrawals, diversions, importation by Metropolitan Water District, municipal use, return flow from irrigation. Since 1940, natural flow affected by Prado flood-control reservoir, capacity, 196,200 acre-ft; three small flood-control reservoirs, combined capacity, 31,900 acre-ft; Big Bear Lake (station 11049000); and Santiago Reservoir, capacity, 25,000 acre-ft. Discharge up to 100 ft³/s can be diverted from Carbon Creek to Coyote Creek 1.5 mi upstream from mouth of Carbon Creek. See schematic diagram of Santa Ana River basin.

AVERAGE DISCHARGE.--17 years (water years 1924-40), 23.4 ft³/s, 16,940 acre-ft/yr; 50 years (water years 1941-89, 1991, unadjusted for storage), 53.2 ft³/s, 38,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,300 ft³/s, Mar. 3, 1938, gage height, 10.20 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,730 ft³/s, Mar. 1, gage height, 6.71 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	3850	2.1	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	3600	3.1	.00	.00	.00	.00	.00
3	.00	.00	.00	7.7	.00	e3000	.81	.00	.00	.00	.00	.00
4	.00	.00	.00	38	.00	e2400	.30	.00	.00	.00	.00	.00
5	.00	.00	.00	3.4	.00	e270	.02	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	e3.0	.03	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	32	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	111	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	2.6	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	220	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	387	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	9.6	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.38	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	227	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	508	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	743	1670	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	927	1360	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	1650	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	507	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	2.8	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	192.10	1670.00	19670.34	6.36	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	6.20	59.6	635	.21	.000	.000	.000	.000	.000
MAX	.00	.00	.00	111	927	3850	3.1	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	381	3310	39020	13	.00	.00	.00	.00	.00

WTR YR 1991 TOTAL 21538.80 MEAN 59.0 MAX 3850 MIN .00 AC-FT 42720

e Estimated.

11078000 SANTA ANA RIVER AT SANTA ANA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-71, 1973 to current year.

WATER TEMPERATURE: Water years 1968-69, 1971, 1973-80, 1982-87.

SEDIMENT DATA: Water years 1968-71, 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1967 to September 1969, October 1970 to September 1971, October 1972 to September 1980, October 1981 to September 1987.

SUSPENDED-SEDIMENT DISCHARGE: October 1967 to September 1971, October 1972 to September 1980, October 1981 to September 1987.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-	TEMPER-	SEDI-	SEDI-	SED.	SED.	SED.
		CHARGE,			MENT,	SUSP.	SUSP.	SUSP.
		INST.	ATURE	MENT,	DIS-	FALL	FALL	FALL
		CUBIC	WATER	SUS-	CHARGE,	DIAM.	DIAM.	DIAM.
		FEET	(DEG C)	PENDE	SUS-	% FINER	% FINER	% FINER
		PER		DENED	PENDE	THAN	THAN	THAN
		SECOND		(MG/L)	(T/DAY)	.002 MM	.004 MM	.008 MM
FEB								
28...	1430	1300	12.5	1010	3550	--	--	--
MAR								
01...	1320	2830	12.5	3410	26100	33	35	38
04...	1445	e2400	12.0	1720	11100	--	--	--
26...	1415	193	12.5	410	214	--	--	--
DATE		SED.						
		SUSP.						
		FALL	FALL	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE
		DIAM.						
		% FINER						
		THAN						
		.016 MM	.031 MM	.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM
FEB								
28...	--	--	71	--	--	--	--	--
MAR								
01...	49	55	62	69	79	93	99	100
04...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--

e Estimated.

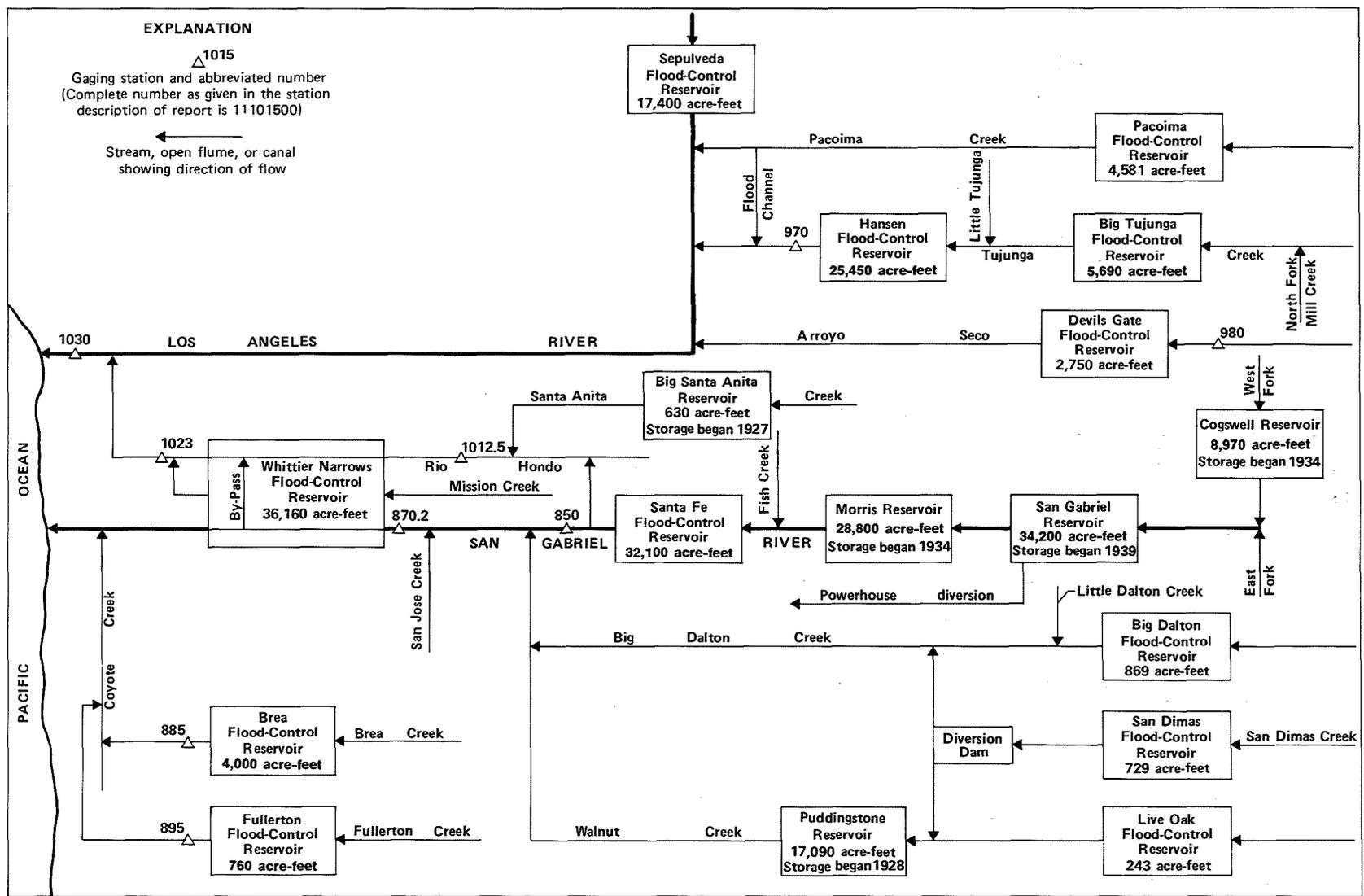


Figure 18. Diversions and storage in San Gabriel and Los Angeles River basins.

SAN GABRIEL RIVER BASIN

11085000 SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CA

LOCATION.--Lat 34°06'44", long 117°58'07", in NE 1/4 SW 1/4 sec.6, T.1 S., R.10 W., Los Angeles County, Hydrologic Unit 18070106, on left bank at stilling basin of outlet of Santa Fe flood-control dam, 500 ft downstream from axis of dam, and 1.7 mi north of Baldwin Park.

DRAINAGE AREA.--236 mi².

PERIOD OF RECORD.--October 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Cogswell and San Gabriel flood-control reservoirs, combined capacity, 43,170 acre-ft; Morris Reservoir, capacity, 28,800 acre-ft; and Santa Fe flood-control reservoir, capacity, 32,100 acre-ft. Diversions upstream from station for irrigation, power development, and ground-water replenishment. At times water is diverted from side of stilling basin to headwaters of Rio Hondo; 16,782 acre-ft were diverted during the current year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion to Rio Hondo provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,900 ft³/s, Jan. 26, 1969, gage height, 22.20 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 619 ft³/s, Sept. 16, gage height, 11.72 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	115	123	.00	.00	.00	.02	186
2	.00	.00	.00	.00	.00	126	25	.00	.00	.00	.01	183
3	.00	.00	.00	.00	.00	.88	.16	.00	.00	.00	.00	110
4	.00	.00	.00	.82	.00	.00	.03	.00	.00	.00	.00	31
5	.00	.00	.00	.25	.00	.00	.00	.00	.00	.00	.00	44
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	138
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	174
8	.00	.00	.00	.00	.00	8.6	.00	.00	.00	.00	.01	154
9	.00	.00	.00	.00	.00	33	.00	.00	.00	.00	.00	174
10	.00	.00	.00	.00	.00	33	.00	.00	.00	.00	.00	145
11	.00	.00	.00	.00	.00	88	.00	.00	.00	.00	.00	148
12	.00	.00	.00	.00	.00	82	.00	.00	.00	.00	.13	195
13	.00	.00	.00	.00	.00	72	.00	.00	.00	.00	.00	256
14	.00	.00	.00	.00	.00	86	.00	.00	.00	.00	.00	376
15	.00	.00	.00	.00	.00	73	.00	.00	.00	.00	.00	530
16	.00	.00	.00	.00	.00	72	.00	.00	.00	.00	.00	309
17	.00	.00	.00	.00	.00	72	.00	.00	.00	.00	.00	178
18	.00	.00	.00	.00	.00	71	.00	.00	.00	.00	.00	322
19	.00	.00	.00	.00	.00	102	.00	.00	.00	.00	.00	256
20	.00	.00	.00	.00	.00	16	.00	.00	.00	.00	.00	248
21	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	240
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.34	.00	233
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47	.00	231
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47	.00	170
25	.00	.00	.00	.00	.00	83	.00	.00	.00	.34	.00	124
26	.00	.00	.00	.00	.00	113	.00	.00	.00	1.1	.00	173
27	.00	.00	.00	.00	3.5	140	.00	.00	.00	2.0	88	197
28	.00	.00	.00	.00	64	146	.00	.00	.00	17	140	197
29	.00	.00	.00	.00	---	141	.00	.00	.00	20	159	197
30	.00	.00	.00	.00	---	135	.00	.00	.00	14	184	193
31	.00	---	.00	.00	---	130	---	.00	---	4.8	186	---
TOTAL	0.00	0.00	0.00	1.07	67.50	1938.49	148.19	0.00	0.00	60.52	757.17	6112
MEAN	.000	.000	.000	.035	2.41	62.5	4.94	.000	.000	1.95	24.4	204
MAX	.00	.00	.00	.82	64	146	123	.00	.00	20	186	530
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	31
AC-FT	.00	.00	.00	2.1	134	3840	294	.00	.00	120	1500	12120

CAL YR 1990 TOTAL 113.05 MEAN .31 MAX 66 MIN .00 AC-FT 224
WTR YR 1991 TOTAL 9084.94 MEAN 24.9 MAX 530 MIN .00 AC-FT 18020

11087020 SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CA

LOCATION.--Lat 34°02'03", long 118°02'14", in La Puente Grant, Los Angeles County, Hydrologic Unit 18070106, at Peck Road 0.8 mi downstream from San Jose flood channel, 1.2 mi upstream from axis of Whittier Narrows Dam, and 1.8 mi south of El Monte.

DRAINAGE AREA.--442 mi².

PERIOD OF RECORD.--October 1955 to September 1957, October 1963 to current year.

REVISED RECORDS.--WDR CA-86-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 220 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good except discharges below 200 ft³/s, which are fair. Flow regulated by San Gabriel, Cogswell, and Santa Fe flood-control reservoirs, combined capacity, 75,300 acre-ft; several small flood-control reservoirs, combined capacity, 19,100 acre-ft; and Morris Reservoir, capacity, 28,800 acre-ft. Many diversions upstream from station for irrigation, power development, and ground-water replenishment. Colorado River water released to the San Gabriel River at a site 14.9 mi upstream from gage, at Metropolitan Water District aqueduct crossing on San Dimas Creek for ground-water replenishment. Los Angeles County Department of Public Works diverted 16,782 acre-ft from San Gabriel River below Santa Fe Dam to Rio Hondo during the current year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion to Rio Hondo provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,600 ft³/s, Jan. 25, 1969, gage height, 10.90 ft; no flow for part of some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,900 ft³/s, Mar. 1, gage height, 7.88 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	136	94	95	3.1	4560	29	.00	.00	.00	.00	95
2	208	136	90	92	2.9	133	5.7	.00	.00	.00	.00	99
3	215	136	85	725	2.1	99	17	.00	.00	.00	.00	97
4	235	139	83	1810	2.0	200	87	.00	.00	.00	.00	104
5	230	136	90	338	1.7	71	116	.00	.00	.00	.00	104
6	233	136	95	8.1	1.0	.58	119	.00	.00	.00	.00	104
7	219	165	91	5.5	23	.00	114	.00	.00	.00	.00	106
8	214	101	97	3.6	80	.00	117	.00	.00	.00	.00	107
9	219	99	102	384	90	.00	117	9.8	.00	.00	.00	109
10	234	105	100	37	87	.00	82	65	.00	.00	.00	111
11	243	105	99	125	86	31	.00	61	.00	.16	.00	105
12	240	101	114	136	84	106	.00	62	.00	60	.00	106
13	237	97	93	140	36	595	.00	55	.00	63	.00	105
14	229	87	87	138	1.5	149	.00	52	.00	59	.00	104
15	224	86	88	142	1.8	59	.00	50	.00	59	.00	104
16	218	89	92	148	1.5	104	.00	56	.00	54	.00	108
17	149	89	96	123	1.7	114	.00	51	.00	55	.00	114
18	28	89	98	119	.77	68	.00	59	.00	61	.00	114
19	3.0	86	22	119	48	1740	.00	62	.00	61	.00	112
20	1.6	261	44	130	54	1380	.00	59	.00	18	.00	113
21	4.7	89	92	142	79	6.8	.00	58	.00	66	.00	114
22	103	26	95	132	87	5.9	.00	16	.00	68	.00	116
23	139	59	96	97	85	5.0	.00	.00	.00	62	.00	119
24	136	95	99	6.3	83	3.5	.00	.00	.00	62	.00	121
25	124	97	91	3.7	86	886	.00	.00	.00	35	.00	109
26	129	157	98	3.9	86	1510	.00	.00	.00	.00	.00	104
27	136	102	93	4.3	3150	2490	.00	.00	.73	.00	12	110
28	135	88	96	56	4970	54	.00	.00	.00	.00	35	114
29	133	90	97	87	---	39	.00	.00	.00	.00	91	111
30	136	91	91	84	---	33	.00	.00	.00	.00	95	115
31	136	---	90	38	---	28	---	.00	---	.00	95	---
TOTAL	5104.3	3273	2798	5472.4	9234.07	14470.78	803.70	715.80	0.73	783.16	328.00	3254
MEAN	165	109	90.3	177	330	467	26.8	23.1	.024	25.3	10.6	108
MAX	243	261	114	1810	4970	4560	119	65	.73	68	95	121
MIN	1.6	26	22	3.6	.77	.00	.00	.00	.00	.00	.00	95
AC-FT	10120	6490	5550	10850	18320	28700	1590	1420	1.4	1550	651	6450

CAL YR 1990 TOTAL 64581.84 MEAN 177 MAX 6440 MIN .00 AC-FT 128100
WTR YR 1991 TOTAL 46237.94 MEAN 127 MAX 4970 MIN .00 AC-FT 91710

SAN GABRIEL RIVER BASIN

11088500 BREA CREEK BELOW BREA DAM, NEAR FULLERTON, CA

LOCATION.--Lat 33°53'16", long 117°55'32", in NE 1/4 NE 1/4 sec.28, T.3 S., R.10 W., Orange County, Hydrologic Unit 18070106, on right bank 0.2 mi downstream from Brea Dam and 1 mi north of Fullerton.

DRAINAGE AREA.--21.6 mi².

PERIOD OF RECORD.--January 1942 to current year.

REVISED RECORDS.--WSP 1041: 1944(M). WSP 1635: 1956, 1958. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 4, 1964, at datum 1.03 ft higher.

REMARKS.--Records poor except for discharges above 100 ft³/s, which are fair. Flow regulated by Brea flood-control reservoir, capacity, 4,000 acre-ft. No diversion upstream from station. Since August 1966 low flow mostly the result of irrigation wastewater from golf course 0.8 mi upstream. See schematic diagram of San Gabriel and Los Angeles River basins.

AVERAGE DISCHARGE.--49 years, 3.23 ft³/s, 2,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,700 ft³/s, Feb. 18, 1980; no flow for parts of some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 696 ft³/s, Mar. 27, gage height, 3.92 ft; minimum daily, 0.38 ft³/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	1.1	1.7	2.4	1.1	290	9.2	2.0	2.6	2.8	e2.5	2.1
2	.42	1.3	1.7	2.2	.91	41	7.5	2.2	2.6	2.8	e2.7	1.8
3	.39	1.0	1.3	40	.82	15	5.5	2.2	2.3	2.7	e2.6	2.2
4	.58	1.2	.87	56	.99	12	5.3	2.2	1.3	2.8	e2.4	2.4
5	.47	1.3	.98	11	.94	17	5.6	1.9	2.6	2.7	e2.1	1.9
6	.49	2.2	.95	1.8	.81	6.5	6.7	2.8	2.3	2.8	1.5	2.2
7	.49	.66	.96	1.2	.83	5.0	6.7	2.9	1.8	2.9	2.2	2.9
8	.79	.72	.91	1.2	.75	4.3	4.4	3.0	1.7	4.7	2.7	4.0
9	.60	.96	.99	34	.79	3.9	3.9	2.8	1.6	e2.6	2.6	3.7
10	.61	.90	.99	2.8	.85	3.5	3.6	2.0	1.4	e2.6	3.1	2.1
11	.63	.82	1.1	2.1	.92	5.6	3.4	2.4	1.5	e2.7	2.5	2.2
12	.58	.78	1.7	1.8	.90	3.3	3.2	2.0	1.6	e2.6	e2.5	2.2
13	.62	.82	1.1	1.6	.85	21	3.3	1.8	1.6	e2.5	e2.5	2.0
14	.73	1.0	.60	1.4	.70	8.0	3.1	2.0	1.6	e2.5	e2.6	2.0
15	.72	1.0	.64	1.3	.82	4.9	2.8	1.8	3.2	e2.4	e2.7	2.2
16	.63	1.0	.67	1.3	.65	3.8	2.8	2.4	2.7	e2.4	e2.6	1.8
17	.69	.98	.65	1.7	.68	3.2	2.6	3.0	1.7	e2.4	e2.5	1.4
18	.58	.94	.66	1.8	.64	6.1	2.8	2.3	1.6	e2.5	e2.4	1.2
19	.67	1.2	.66	2.4	.81	101	2.4	2.4	1.9	e2.6	e2.6	1.1
20	.70	8.4	.62	2.1	1.1	111	3.5	2.4	1.9	e2.6	e2.6	1.2
21	.62	1.5	.65	1.4	1.7	18	3.7	2.3	1.5	e2.5	e2.5	1.3
22	.70	1.1	.62	1.3	1.7	7.9	3.7	2.5	1.5	e2.5	e2.6	1.2
23	.73	1.7	.64	1.4	1.0	5.7	3.9	2.8	1.4	e2.6	e2.7	1.2
24	.70	1.1	.75	1.4	.83	5.0	3.2	2.9	1.4	e2.7	e2.7	1.2
25	.55	1.2	.78	1.3	1.1	61	3.3	3.0	1.5	e2.5	e2.5	1.3
26	.69	2.2	1.0	1.2	1.6	102	3.3	2.9	1.5	e2.5	e2.5	1.5
27	.81	2.0	1.8	1.2	155	236	2.7	1.1	1.4	e2.6	e2.6	1.6
28	.84	2.1	1.7	1.2	204	24	2.3	1.4	1.4	e2.6	e2.4	1.2
29	2.4	1.4	1.9	1.1	---	12	2.1	.96	2.1	e2.7	2.1	1.1
30	1.3	1.8	2.2	1.2	---	8.8	2.2	2.1	2.6	e2.5	2.3	1.2
31	1.0	---	2.2	1.2	---	8.1	---	2.4	---	e2.6	2.1	---
TOTAL	22.11	44.38	33.99	184.0	383.79	1154.6	118.7	70.86	55.8	82.9	76.9	55.4
MEAN	.71	1.48	1.10	5.94	13.7	37.2	3.96	2.29	1.86	2.67	2.48	1.85
MAX	2.4	8.4	2.2	56	204	290	9.2	3.0	3.2	4.7	3.1	4.0
MIN	.38	.66	.60	1.1	.64	3.2	2.1	.96	1.3	2.4	1.5	1.1
AC-FT	44	88	67	365	761	2290	235	141	111	164	153	110

CAL YR 1990 TOTAL 1042.50 MEAN 2.86 MAX 404 MIN .13 AC-FT 2070
WTR YR 1991 TOTAL 2283.43 MEAN 6.26 MAX 290 MIN .38 AC-FT 4530

e Estimated.

11089500 FULLERTON CREEK BELOW FULLERTON DAM, NEAR BREA, CA

LOCATION.--Lat 33°53'45", long 117°53'07", in NW 1/4 SW 1/4 sec.24, T.3 S., R.10 W., Orange County, Hydrologic Unit 18070106, on left bank of outlet channel of Fullerton Dam and 1.6 mi southeast of Brea.

DRAINAGE AREA.--4.94 mi².

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WSP 1245: 1950(M). WSP 1928: Drainage area. WDR CA-82-1: 1981.

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above National Geodetic Vertical Datum of 1929, from topographic map. V-notch sharp-crested weir used Oct. 25, 1946, to Feb. 2, 1956. Prior to Dec. 3, 1971, at datum 3.00 ft higher.

REMARKS.--Records fair. Flow regulated by Fullerton flood-control reservoir, capacity, 760 acre-ft (resurvey of 1970). Small tributary formerly entering below station diverted into reservoir since December 1954. See schematic diagram of San Gabriel and Los Angeles River basins.

AVERAGE DISCHARGE.--13 years (water years 1942-54), 0.19 ft³/s, 135 acre-ft/yr; 37 years (water years 1955-91), 1.30 ft³/s, 942 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 392 ft³/s, Mar. 1, 1983, gage height, 8.25 ft, present datum; no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 343 ft³/s, Mar. 1, gage height, 7.98 ft; minimum daily, 0.15 ft³/s, Feb. 26, Mar. 8-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.51	.51	.47	.43	e.34	e101	e.51	e.36	e.51	e.43	e.67	e.42
2	.56	.51	.39	.42	e.32	e1.0	e.60	e.42	e.36	e.51	e.65	e.36
3	.46	.43	.46	19	e.30	e.34	e.73	e.56	e.36	e.51	e.60	e.36
4	.49	.40	.40	29	e.30	e7.0	e.77	e.49	e.36	e.51	e.60	e.36
5	.50	.55	.44	1.3	e.36	e1.9	e.70	e.51	e.36	e.51	e.54	e.42
6	.45	.51	.38	.52	e.51	e.19	e.70	e.51	e.36	e.51	e.51	e.51
7	.36	.44	.34	.44	e.51	e.17	e.51	e.51	e.36	e.51	e.56	e.58
8	.40	.48	.36	.43	e.60	e.15	e.51	e.51	e.36	e2.4	e.51	e.70
9	.40	.47	.36	22	e.59	e.15	e.70	e.58	e.36	e.38	e.51	e.70
10	.39	.51	.42	e9.2	e.51	e.15	e.51	e.43	e.37	e.36	e.51	e.56
11	.43	.43	.45	e.80	e.57	e4.1	e.51	e.51	e.38	e.42	e.51	e.51
12	.42	.54	.79	e.60	e.63	e2.0	e.42	e.43	e.40	e.36	e.42	e.51
13	.45	.57	.48	e.45	e.51	e1.6	e.36	e.44	e.45	e.36	e.51	e.51
14	.43	.57	.46	e.40	e.23	e.60	e.51	e.51	e.50	e.36	e.51	e.51
15	.54	.60	.43	e.34	e.24	e.40	e.51	e.36	e.56	e.36	e.51	e.51
16	.60	.64	.43	e.38	e.23	e.36	e.51	e.43	e.52	e.36	e.49	e.51
17	.55	.60	.47	e.45	e.20	e.36	e.36	e.51	e.51	e.36	e.49	e.51
18	.56	.60	.46	e.46	e.18	e5.3	e.36	e.51	e.58	e.70	e.49	e.51
19	.51	.91	.42	e.52	e.17	e32	e.36	e.36	e.70	e8.2	e.51	e.51
20	.49	5.2	.36	e.56	e.21	e48	e.40	e.36	e.51	e2.7	e.51	e.49
21	.45	.49	.38	e.46	e.21	e1.5	e.73	e.36	e.51	e2.1	e.51	e.51
22	.47	.38	.35	e.36	e.19	e.67	e.51	e.36	e.36	e2.9	e.51	e.44
23	.53	.36	.37	e.36	e.23	e.44	e.51	e.41	e.51	e1.2	e.50	e.51
24	.47	.40	.36	e.36	e.19	e.37	e.47	e.37	e.51	e.51	e.51	e.29
25	.47	.40	.42	e.36	e.19	e31	e.46	e.36	e.51	e.51	e.51	e.28
26	.47	.62	.40	e.36	e.15	e41	e.36	e.40	e.51	e.51	e.50	e.28
27	.48	.41	.43	e.36	e88	e102	e.43	e.46	e.61	e.51	e.50	e.38
28	.51	.37	.46	e.36	e85	e.89	e.36	e.51	e.51	e.58	e.49	e.30
29	.55	.34	.46	e.36	---	e.54	e.36	e.58	e.48	e.48	e.42	e.28
30	.56	.38	.40	e.40	---	e.51	e.48	e.70	e.44	e.51	e.36	e.30
31	.55	---	.44	e.40	---	e.51	---	e.51	---	e.60	e.36	---
TOTAL	15.01	19.62	13.24	91.84	181.67	386.20	15.21	14.32	13.82	31.22	15.78	13.62
MEAN	.48	.65	.43	2.96	6.49	12.5	.51	.46	.46	1.01	.51	.45
MAX	.60	5.2	.79	.29	.88	102	.77	.70	.70	8.2	.67	.70
MIN	.36	.34	.34	.34	.15	.15	.36	.36	.36	.36	.36	.28
AC-FT	30	39	26	182	360	766	30	28	27	62	31	27

CAL YR 1990 TOTAL 515.38 MEAN 1.41 MAX 195 MIN .11 AC-FT 1020
WTR YR 1991 TOTAL 811.55 MEAN 2.22 MAX 102 MIN .15 AC-FT 1610

e Estimated.

LOS ANGELES RIVER BASIN

11097000 BIG TUJUNGA CREEK BELOW HANSEN DAM, CA

LOCATION.--Lat 34°15'13", long 118°23'17", in Mission San Fernando Grant, Los Angeles County, Hydrologic Unit 18070105, in city of Los Angeles, on left bank of outlet channel 0.5 mi downstream from Hansen Dam, 0.1 mi upstream from Glen Oaks Boulevard, and 3 mi southeast of San Fernando.

DRAINAGE AREA.--153 mi².

PERIOD OF RECORD.--May 1932 to February 1938, August 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1975, published as Tujunga Creek below Hansen Dam.

REVISED RECORDS.--WDR CA-84-1: 1978(M).

GAGE.--Water-stage recorder. Datum of gage is 943.32 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers benchmark). See WSP 1735 for history of changes prior to Oct. 1, 1953.

REMARKS.--No estimated daily discharges. Records poor. Flow regulated since July 1931 by Big Tujunga flood-control reservoir, capacity, 5,690 acre-ft, and since September 1940 by Hansen flood-control reservoir, capacity, 25,450 acre-ft. Several small diversions for domestic use and irrigation. Los Angeles County Department of Public Works diverts water 0.3 mi upstream from gage to spreading grounds, as shown in footnote below table. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s, Feb. 10, 1978, Mar. 2, 1983; maximum gage height, 7.64 ft, Mar. 2, 1983; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 54,000 ft³/s, estimated, Mar. 2, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,010 ft³/s, Mar. 1, gage height, 2.32 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	333	.00	.00	.00	11	.00	.00
2	.00	.00	.00	.00	.00	155	.00	.00	.00	9.7	.00	.00
3	.00	.00	.00	.00	.00	105	.00	.00	.00	9.7	.00	.00
4	.00	.00	.00	.00	.00	52	.00	.00	.00	9.7	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	5.6	9.7	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	9.6	8.2	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	8.2	8.0	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	7.4	8.0	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	6.1	8.0	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	5.1	6.9	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	4.6	6.1	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	5.2	6.1	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	5.7	6.1	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	3.1	5.7	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.50	4.6	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.85	4.6	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	3.8	4.6	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	8.9	4.6	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	9.7	3.4	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	9.7	3.4	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	9.7	3.4	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	9.7	3.4	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	9.7	1.4	.00	.00
24	.00	.00	.00	.00	.00	1.3	.00	.00	9.7	.22	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	9.7	.28	.00	.00
26	.00	.00	.00	.00	.00	29	.00	.00	11	.50	.00	.00
27	.00	.00	.00	.00	.00	.18	285	.00	13	.50	.00	.00
28	.00	.00	.00	.00	.00	18	2.5	.00	12	.50	.00	.00
29	.00	.00	.00	.00	.00	---	.00	.00	12	.22	.00	.00
30	.00	.00	.00	.00	.00	---	.00	.00	12	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	18.18	962.80	0.00	0.00	202.55	148.52	0.00	0.00
MEAN	.000	.000	.000	.000	.65	31.1	.000	.000	6.75	4.79	.000	.000
MAX	.00	.00	.00	.00	18	333	.00	.00	13	11	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	36	1910	.00	.00	402	295	.00	.00
a	44	166	90	141	475	6830	3680	1010	583	584	253	276

CAL YR 1990 TOTAL 2.97 MEAN .008 MAX 1.2 MIN .00 AC-FT 5.9
WTR YR 1991 TOTAL 1332.05 MEAN 3.65 MAX 333 MIN .00 AC-FT 2640

a Combined discharge, in acre-feet, of creek and diversion.

11098000 ARROYO SECO NEAR PASADENA, CA

LOCATION.--Lat 34°13'20", long 118°10'36", in NW 1/4 NE 1/4 sec.31, T.2 N., R.12 W., Los Angeles County, Hydrologic Unit 18070105, on right bank 0.7 mi east of Angeles Crest Highway, 1.5 mi upstream from Millard Canyon, and 5.5 mi northwest of Pasadena.

DRAINAGE AREA.--16.0 mi².

PERIOD OF RECORD.--December 1910 to January 1913 (fragmentary), April 1913 to November 1915, April 1916 to current year.

GAGE.--Water-stage recorder. Broad-crested weir since November 1938. Datum of gage is 1,397.88 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1916, nonrecording gage at different datum. Oct. 1, 1916, to Oct. 19, 1945, water-stage recorder at datum 4.00 ft lower.

REMARKS.--No estimated daily discharges. Records good except for discharges below 1 ft³/s, which are fair. No regulation or diversion upstream from station. See schematic diagram of San Gabriel and Los Angeles River basins.

AVERAGE DISCHARGE.--77 years (water years 1914-15, 1917-91), 9.52 ft³/s, 6,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,620 ft³/s, Mar. 2, 1938, gage height, 9.42 ft, present datum, on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0515	*921	*4.30	Mar. 26	2145	439	3.54

No flow Oct. 25-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.01	.08	.13	.51	246	31	4.6	2.1	1.3	.90	.10
2	.07	.04	.22	.14	.56	27	25	4.7	2.0	1.3	.89	.11
3	.06	.10	.08	.61	.56	14	21	4.6	1.8	1.2	.89	.12
4	.04	.20	.09	1.0	.56	9.7	19	4.3	1.6	1.2	.87	.15
5	.04	.08	.09	.73	.56	9.1	17	3.8	1.6	1.3	.89	.16
6	.05	.23	.09	.28	.56	6.6	16	3.7	1.6	1.2	.86	.22
7	.04	.15	.08	.21	.56	5.7	15	3.3	1.4	1.2	.81	.31
8	.03	.03	.06	.18	.56	4.7	13	3.2	1.4	1.5	.74	.36
9	.03	.05	.06	.62	.54	4.1	12	3.2	1.3	1.5	.71	.50
10	.02	.02	.07	.46	.55	3.6	11	3.2	1.2	1.7	.63	.46
11	.01	.02	.05	.32	.54	3.6	10	3.3	1.1	1.7	.57	.43
12	.02	.01	.08	.32	.54	3.0	9.9	3.2	1.1	1.5	.64	.44
13	.01	.01	.10	.48	.53	5.3	9.2	3.0	1.1	1.4	.64	.60
14	.02	.01	.10	.75	.51	6.3	8.6	2.9	1.3	1.2	.80	.54
15	.03	.01	.08	.84	.49	5.0	8.4	2.8	1.4	1.2	.75	.43
16	.04	.01	.10	1.0	.55	4.0	8.1	2.5	1.2	1.1	.65	.33
17	.04	.01	.10	1.2	.57	3.5	7.6	2.5	1.0	1.1	.60	.31
18	.04	.01	.10	1.3	.60	3.5	7.3	2.6	.99	1.2	.59	.33
19	.05	.01	.10	1.1	.51	62	6.9	2.5	.97	1.3	.50	.29
20	.04	.59	.11	.83	.49	63	6.9	2.5	.96	1.3	.46	.28
21	.02	.03	.13	.66	.48	37	6.8	2.6	1.0	1.3	.41	1.1
22	.02	.01	.18	.23	.48	23	6.7	2.6	1.0	1.3	.40	.92
23	.02	.01	.17	.32	.48	18	6.8	2.4	1.1	1.2	.39	.97
24	.01	.01	.30	.48	.48	16	6.6	2.1	1.1	1.1	.40	.15
25	.00	.01	.43	.48	.45	51	6.4	2.0	1.2	1.1	.40	.13
26	.00	.08	.13	.48	.48	88	6.0	1.9	1.2	1.0	.47	.15
27	.00	.10	.18	.52	6.0	135	5.4	2.1	1.3	.98	.47	.16
28	.00	.09	.15	.55	140	67	4.8	2.2	1.3	.86	.42	.21
29	.00	.08	.11	.54	---	54	4.7	2.1	1.5	.82	.39	.24
30	.00	.07	.12	.54	---	44	4.5	2.2	1.6	.88	.36	.12
31	.01	---	.11	.53	---	38	---	2.3	---	.94	.27	---
TOTAL	0.80	2.09	3.85	17.83	159.70	1060.7	321.6	90.9	39.42	37.88	18.77	10.62
MEAN	.026	.070	.12	.58	5.70	34.2	10.7	2.93	1.31	1.22	.61	.35
MAX	.07	.59	.43	1.3	140	246	31	4.7	2.1	1.7	.90	1.1
MIN	.00	.01	.05	.13	.45	3.0	4.5	1.9	.96	.82	.27	.10
AC-FT	1.6	4.1	7.6	35	317	2100	638	180	78	75	37	21

CAL YR 1990 TOTAL 358.62 MEAN .98 MAX 61 MIN .00 AC-FT 711
WTR YR 1991 TOTAL 1764.16 MEAN 4.83 MAX 246 MIN .00 AC-FT 3500

11101250 RIO HONDO ABOVE WHITTIER NARROWS DAM, CA

LOCATION.--Lat 34°03'30", Long 118°04'15", in Potrero Grande Grant, Los Angeles County, Hydrologic Unit 18070105, on right bank 0.3 mi downstream from Garvey Avenue, 0.4 mi downstream from Rubio Wash, 2.8 mi upstream from axis of Whittier Narrows Dam, and 2.2 mi west of El Monte.

DRAINAGE AREA.--91.2 mi².

PERIOD OF RECORD.--February 1956 to current year.

GAGE.--Water-stage recorder. Concrete trapezoidal channel. Datum of gage is 217.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs, and Sierra Madre, Las Flores, and Rubio debris basins, combined capacity, 2,195 acre-ft. Many diversions upstream from station for domestic use and irrigation. Los Angeles County Department of Public Works diverted 16,782 acre-ft from San Gabriel River below Santa Fe Dam to Rio Hondo during current year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion provided by the Los Angeles County Department of Public Works.

AVERAGE DISCHARGE.--35 years, 41.0 ft³/s, 29,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,200 ft³/s, Feb. 16, 1980, gage height, 7.35 ft; no flow for some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,610 ft³/s, Mar. 18, gage height, 4.55 ft; minimum daily, 0.09 ft³/s, Apr. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.95	.82	.40	.76	.49	e1160	8.5	.32	.20	.37	574	.49
2	.81	.61	.31	.89	.54	e2.0	.96	.16	.22	.42	510	.74
3	.87	.71	.42	304	.51	e1.2	1.2	.37	.25	.75	373	2.5
4	.71	.71	2.0	680	.78	e187	1.1	.32	.28	.28	332	1.8
5	.87	.84	.58	16	.39	8.0	.35	.28	.26	.25	250	.96
6	.90	.78	.78	.76	.44	.66	.34	.48	.21	.40	258	1.1
7	.91	.56	.72	.69	.33	.55	.32	.27	.34	.22	290	.48
8	.74	1.0	.59	.81	.35	.55	.24	.53	.48	7.0	234	.54
9	.76	2.1	.83	193	.31	.48	.23	.53	.26	.87	137	.51
10	.78	1.1	.97	1.4	.23	.42	.25	74	.55	.33	106	.89
11	.72	1.2	.75	1.2	.30	5.5	.27	.61	.34	.41	75	.76
12	.74	1.4	10	.54	.69	.63	.28	.24	.30	.53	55	.81
13	.89	1.1	.96	.48	.85	152	.98	.40	.24	.37	41	.84
14	1.7	1.5	.74	1.4	.88	1.4	.22	.45	.34	.25	37	.72
15	2.9	1.4	.45	.91	.36	6.8	.51	.28	.43	.30	33	.37
16	.90	3.1	.73	1.0	.32	.36	1.2	.22	.25	.59	30	.68
17	.95	1.1	.56	1.0	.26	.23	1.1	.20	.30	.44	26	.59
18	.96	1.0	1.0	.41	.28	342	.41	.21	.34	.63	23	.57
19	.74	27	.53	.95	.73	919	.47	.25	.44	.68	20	.63
20	.65	148	.44	1.2	1.1	557	.45	.17	.38	.45	17	.65
21	.59	.77	.46	2.3	1.1	.99	2.8	.24	.30	.36	13	.58
22	.81	.36	.63	.74	1.2	.41	.56	.95	.36	.29	9.7	.49
23	.86	.27	.53	.65	1.1	.34	.46	.29	.50	.39	7.7	.64
24	.98	.36	.54	.57	.26	.29	.86	.20	.50	.42	5.3	.68
25	.78	.40	.51	.65	.28	660	.68	.18	.60	.41	3.4	.72
26	.94	9.3	.95	.50	.76	1010	.18	.23	.36	.59	2.3	.64
27	.93	.28	.59	.47	1510	460	.15	.20	.50	.43	1.1	1.1
28	.72	.42	.53	.88	e1900	5.0	.09	.52	.67	.46	.52	12
29	.88	.35	.67	1.1	---	2.6	.56	.42	.54	1.1	.56	.39
30	2.2	.43	.76	.73	---	.96	.33	1.0	.22	324	.75	.51
31	1.1	---	.79	.51	---	.30	---	.25	---	636	.56	---
TOTAL	30.24	208.97	30.72	1216.50	3424.84	5486.67	26.05	84.77	10.96	979.99	3465.89	34.38
MEAN	.98	6.97	.99	39.2	122	177	.87	2.73	.37	31.6	112	1.15
MAX	2.9	148	10	680	1900	1160	8.5	74	.67	636	574	12
MIN	.59	.27	.31	.41	.23	.23	.09	.16	.20	.22	.52	.37
AC-FT	60	414	61	2410	6790	10880	52	168	22	1940	6870	68

CAL YR 1990 TOTAL 5679.31 MEAN 15.6 MAX 1910 MIN .27 AC-FT 11260
WTR YR 1991 TOTAL 14999.98 MEAN 41.1 MAX 1900 MIN .09 AC-FT 29750

e Estimated.



11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA

LOCATION.--Lat 34°01'00", long 118°05'15", in Paso de Bartolo Grant, Los Angeles County, Hydrologic Unit 18070105, on right levee 0.2 mi upstream from Beverly Boulevard, 0.4 mi downstream from axis of Whittier Narrows Dam, and 1.0 mi northeast of Montebello.

DRAINAGE AREA.--124 mi².

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 175 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except for discharges below 100 ft³/s, which are poor. Flow regulated by Whittier Narrows flood-control reservoir, capacity, 36,160 acre-ft. There are several small flood-control reservoirs (combined capacities, 1,700 acre-ft) and several small debris basins above Whittier Narrows Dam. Many diversions for domestic use and irrigation. At times flow is diverted from San Gabriel River to Rio Hondo from sites below Santa Fe Dam and above Whittier Narrows Dam. See schematic diagram of San Gabriel and Los Angeles River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,800 ft³/s, Jan. 25, 1969, gage height, 13.82 ft, from rating curve extended above 15,000 ft³/s on basis of gate openings at dam at gage heights 12.32 and 13.82 ft; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,100 ft³/s, Feb. 27, gage height, 9.32 ft; minimum daily, 1.6 ft³/s, Jan. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	270	49	145	60	54	4600	128	3.7	43	56	387	347
2	270	85	141	115	60	731	38	3.7	46	70	365	357
3	189	77	66	526	63	243	48	3.7	36	75	323	381
4	109	91	34	1170	73	116	38	3.1	37	80	306	431
5	223	94	72	494	81	143	40	4.1	31	84	286	461
6	244	80	2.7	56	69	41	43	7.7	33	79	287	473
7	262	108	2.4	24	66	65	47	6.4	43	83	318	485
8	287	69	1.9	1.6	81	60	43	24	37	90	299	517
9	212	69	1.9	267	69	59	98	21	34	84	238	544
10	224	68	86	35	79	58	171	55	48	83	228	569
11	391	69	149	111	49	80	55	20	42	92	232	609
12	358	64	169	116	7.7	99	56	18	37	96	198	629
13	365	91	156	122	6.4	414	54	17	53	151	113	491
14	316	127	141	128	10	113	59	16	102	156	116	512
15	315	142	150	139	34	109	60	20	109	148	139	648
16	364	139	149	141	40	101	42	42	113	154	189	620
17	317	156	143	131	50	102	56	64	71	154	208	328
18	167	177	134	140	42	148	62	74	60	150	217	79
19	127	186	89	140	27	2210	57	78	68	159	233	431
20	123	274	59	149	31	623	53	69	72	114	248	335
21	137	97	66	174	22	191	59	67	70	163	179	318
22	271	40	80	165	24	103	45	43	68	176	222	309
23	167	14	82	130	29	170	40	21	73	148	258	284
24	6.2	14	84	35	25	156	44	24	24	155	215	272
25	3.7	12	78	16	20	483	40	28	1.9	143	278	299
26	3.7	26	77	8.3	53	776	47	36	1.9	85	192	328
27	4.9	60	76	18	1800	3620	44	38	41	89	156	327
28	7.3	92	70	99	5550	171	49	32	44	94	210	385
29	19	107	66	107	---	153	22	33	56	81	251	356
30	27	136	59	31	---	178	6.5	32	55	195	343	278
31	31	---	60	52	---	163	---	38	---	409	335	---
TOTAL	5810.8	2813	2689.9	4900.9	8515.1	16279	1644.5	942.4	1549.8	3896	7569	12403
MEAN	187	93.8	86.8	158	304	525	54.8	30.4	51.7	126	244	413
MAX	391	274	169	1170	5550	4600	171	78	113	409	387	648
MIN	3.7	12	1.9	1.6	6.4	41	6.5	3.1	1.9	56	113	79
AC-FT	11530	5580	5340	9720	16890	32290	3260	1870	3070	7730	15010	24600

CAL YR 1990 TOTAL 56430.28 MEAN 155 MAX 5940 MIN .01 AC-FT 111900
WTR YR 1991 TOTAL 69013.4 MEAN 189 MAX 5550 MIN 1.6 AC-FT 136900

11103000 LOS ANGELES RIVER AT LONG BEACH, CA
(National stream-quality accounting network station)

LOCATION.--Lat 33°49'02", long 118°12'20", in Los Cerritos Grant, Los Angeles County, Hydrologic Unit 18070105, on right bank 5,000 ft upstream from Willow Street, 3.4 mi north of Long Beach, and 3.7 mi upstream from mouth.

DRAINAGE AREA.--827 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1928 to September 1983, October 1988 to current year. October 1983 to September 1988, available in files of Los Angeles County Department of Public Works; not reviewed by U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 11.91 ft above National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Department of Public Works). See WSP 1735 for history of changes prior to Jan. 19, 1956.

REMARKS.--No estimated daily discharges. Flow regulated since September 1940 by Hansen flood-control reservoir, capacity, 25,450 acre-ft, from April 1983 survey; Sepulveda flood-control reservoir, capacity, 17,400 acre-ft, from December 1982 survey; and several small flood-control reservoirs. City of Los Angeles stores imported Owens River water in San Fernando and Chatsworth reservoirs and at times discharges imported water into Los Angeles River upstream from station. Many diversions upstream from station for domestic use and irrigation. AVERAGE DISCHARGE represents flow to the ocean, regardless of upstream development. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records provided by Los Angeles County Department of Public Works.

AVERAGE DISCHARGE.--57 years (water years 1930-83, 1989-91), 215 ft³/s, 155,770 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 129,000 ft³/s, Feb. 16, 1980, gage height, 17.99 ft; no flow at times in 1929-30, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 10,700 ft³/s, Feb. 28; minimum daily, 108 ft³/s, Sept. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	122	146	128	137	8290	187	137	122	120	131	120
2	126	122	146	185	137	735	166	137	122	120	124	122
3	126	122	143	1010	137	333	146	124	122	116	122	135
4	128	120	127	2220	137	343	141	120	124	116	121	137
5	128	121	126	879	184	690	141	120	124	153	121	135
6	128	123	125	295	194	312	139	120	124	141	118	129
7	128	124	122	285	192	334	141	129	123	131	118	127
8	128	122	122	296	193	301	142	141	120	257	118	126
9	129	123	121	1200	194	300	143	140	120	175	118	124
10	128	124	120	494	194	287	142	129	120	132	118	108
11	128	124	120	315	194	322	142	137	120	117	118	110
12	125	125	120	283	184	306	143	139	120	153	118	112
13	124	126	173	250	182	627	151	136	120	143	114	112
14	124	126	140	229	177	504	150	140	118	139	114	114
15	124	124	131	243	139	368	155	141	118	137	134	112
16	124	124	130	218	138	354	160	141	118	118	142	114
17	126	122	127	147	136	320	149	142	118	117	136	109
18	126	122	126	146	135	469	147	122	118	148	129	109
19	126	124	128	146	133	6670	144	122	116	149	128	148
20	126	2790	128	146	133	3130	147	122	147	138	149	156
21	125	1590	128	146	133	547	152	122	144	133	144	128
22	125	171	125	146	130	418	150	122	137	130	131	129
23	125	161	124	142	130	363	149	122	137	130	130	127
24	125	161	124	139	130	352	140	122	137	125	126	124
25	120	161	124	139	130	2700	144	122	137	121	127	124
26	122	215	124	139	130	3110	151	122	156	120	127	144
27	122	156	124	139	5760	7030	151	122	151	154	125	144
28	122	135	124	139	10700	786	136	122	137	144	120	250
29	122	124	124	139	---	543	140	122	120	141	116	194
30	122	124	124	137	---	413	139	122	120	132	116	181
31	122	---	124	137	---	365	---	122	---	130	114	---
TOTAL	3879	8128	3990	10657	20493	41622	4428	3981	3810	4280	3867	4004
MEAN	125	271	129	344	732	1343	148	128	127	138	125	133
MAX	129	2790	173	2220	10700	8290	187	142	156	257	149	250
MIN	120	120	120	128	130	287	136	120	116	116	114	108
AC-FT	7690	16120	7910	21140	40650	82560	8780	7900	7560	8490	7670	7940

CAL YR 1990 TOTAL 73675 MEAN 202 MAX 12100 MIN 115 AC-FT 146100
WTR YR 1991 TOTAL 113139 MEAN 310 MAX 10700 MIN 108 AC-FT 224400

11103000 LOS ANGELES RIVER AT LONG BEACH, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.
 CHEMICAL DATA: Water years 1973 to current year.
 BIOLOGICAL DATA: Water years 1973-81.
 SPECIFIC CONDUCTANCE: Water years 1974-75, 1980-83.
 WATER TEMPERATURE: Water years 1974-75, 1980-83.
 SEDIMENT DATA: Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
 SPECIFIC CONDUCTANCE: October 1973 to September 1975, July 1980 to September 1983.
 WATER TEMPERATURE: October 1973 to September 1975, January 1980 to September 1983.

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperature from October 1973 to September 1975, January 1980 to September 1983.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, SATUR-ATION (%)	COLI-FORM, FECAL, UM-MF (COLS./100 ML)	STREP-TOCOCOCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CaCO3)
DEC 19...	1230	122	1100	9.2	14.0	3.1	750	>20.0	>196	640	900	220
MAR 28...	0845	586	624	8.4	10.0	100	760	16.1	143	4400	9100	210
JUN 28...	1200	133	1030	10.0	26.0	4.3	755	>20.0	>245	780	K93	240
SEP 26...	1230	138	1140	9.5	23.0	2.7	755	>20.0	>253	3200	330	240
DATE	HARD-NESS NONCARB DISSOLV FLD. AS CaCO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)
DEC 19...	85	53	22	120	52	3	11	122	23	138	150	160
MAR 28...	74	55	17	48	33	1	5.0	157	3	133	130	49
JUN 28...	110	64	19	120	51	3	13	16	67	125	190	140
SEP 26...	100	61	22	140	54	4	13	70	49	139	200	170
DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
DEC 19...	0.70	12	600	646	0.82	0.930	0.920	4.50	4.70	4.90	4.80	6.9
MAR 28...	0.60	18	399	419	0.54	0.190	0.120	2.50	2.60	2.30	2.20	3.4
JUN 28...	0.70	19	642	659	0.87	1.30	1.30	3.60	3.50	1.10	1.00	5.0
SEP 26...	0.70	18	692	724	0.94	0.440	0.430	2.20	2.20	2.10	2.10	5.5
DATE	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
DEC 19...	2.80	2.30	2.30	2.20	10	3	27	<0.5	<1.0	2	<3	6
MAR 28...	0.690	0.450	0.590	0.380	20	2	44	<0.5	<1.0	<1	<3	4
JUN 28...	1.60	0.660	0.760	0.450	20	7	29	<0.5	1.0	1	<3	<1
SEP 26...	2.20	0.950	1.10	0.840	30	6	30	<0.5	2.0	<1	<3	<1

LOS ANGELES RIVER BASIN

11103000 LOS ANGELES RIVER AT LONG BEACH, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 19...	28	1	21	16	<0.1	10	9	<2	<1.0	390	<6	35
MAR 28...	29	<1	23	47	<0.1	<10	4	1	<1.0	380	<6	14
JUN 28...	63	<1	63	10	<0.1	30	<1	1	<1.0	470	<6	40
SEP 26...	21	2	46	4	<0.1	30	14	1	<1.0	480	<6	38

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOC- TION, TOTAL (FEET)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, PENDE- D (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN											
28...*	1135	1.38	23.0	1030	10.1	26.0	755	>20.0	>245	30	81
28...*	1140	1.40	28.0	1030	10.0	26.0	755	>20.0	>245	29	81
28...*	1145	1.40	34.0	1030	10.0	26.0	755	>20.0	>245	33	72
28...*	1150	1.38	41.0	1030	10.0	26.0	755	>20.0	>245	36	77
28...*	1155	0.80	49.0	1030	10.0	26.0	755	>20.0	>245	30	82
SEP											
26...*	1205	0.33	55.0	1140	9.6	23.5	755	>20.0	>254	--	--
26...*	1210	1.37	78.0	1140	9.5	23.0	755	>20.0	>253	--	--
26...*	1215	1.39	83.0	1140	9.5	23.0	755	>20.0	>253	--	--
26...*	1220	1.38	88.0	1140	9.5	23.0	755	>20.0	>253	--	--
26...*	1225	1.34	94.0	1140	9.6	23.5	755	>20.0	>254	--	--

* Instantaneous discharge at the time of cross-sectional measurements: June 28, 133 ft³/s; Sept. 26, 138 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE- D (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE- D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 19...	1230	122	14.0	10	3.3	73
MAR 28...	0845	586	10.0	334	528	92
JUN 28...	1200	133	26.0	28	10	80

11108075 CASTAIC CREEK ABOVE FISH CREEK, NEAR CASTAIC, CA

LOCATION.--Lat 34°36'23", long 118°39'51", in SW 1/4 SE 1/4 sec.15, T.6 N., R.17 W, Los Angeles County, Hydrologic Unit 18070102, on left bank 100 ft upstream from bridge, 1.4 mi north of Castaic powerplant, and 8.5 mi northwest of Castaic.

DRAINAGE AREA.--37.0 mi².

PERIOD OF RECORD.--October 1976 to September 1978 (published as Castaic Creek One Mile above Fish Creek), October 1988 to current year. October 1968 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 1,640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Station is used to monitor natural inflow to Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft³/s, Mar. 4, 1978, gage height, 7.00 ft, from information furnished by California Department of Water Resources; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s, Jan. 19, 1969, gage height unknown, from information furnished by California Department of Water Resources.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 579 ft³/s, Mar. 19, gage height, 3.70 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	e.00	e.00	e.00	e.00	e5.4	e10	e1.6	e.10	e.00	e.00	e.00
2	e.00	e.00	e.00	e.00	e.00	e2.0	e9.3	e1.5	e.09	e.00	e.00	e.00
3	e.00	e.00	e.00	e.00	e.00	e.50	e8.2	e1.4	e.08	e.00	e.00	e.00
4	e.00	e.00	e.00	e.00	e.00	e.10	e7.0	e1.2	e.06	e.00	e.00	e.00
5	e.00	e.00	e.00	e.00	e.00	e.20	e6.0	e1.1	e.05	e.00	e.00	e.00
6	e.00	e.00	e.00	e.00	e.00	e.09	e5.6	e1.0	e.04	e.00	e.00	e.00
7	e.00	e.00	e.00	e.00	e.00	e.07	e5.0	e.90	e.03	e.00	e.00	e.00
8	e.00	e.00	e.00	e.00	e.00	e.07	e4.7	e.90	e.02	e.00	e.00	e.00
9	e.00	e.00	e.00	e.00	e.00	e.07	e4.6	e.90	e.01	e.00	e.00	e.00
10	e.00	e.00	e.00	e.00	e.00	e.07	e4.3	e.80	e.00	e.00	e.00	e.00
11	e.00	e.00	e.00	e.00	e.00	e.07	e4.1	e.70	e.00	e.00	e.00	e.00
12	e.00	e.00	e.00	e.00	e.00	e.10	e3.7	e.70	e.00	e.00	e.00	e.00
13	e.00	e.00	e.00	e.00	e.00	e.50	e3.1	e.70	e.00	e.00	e.00	e.00
14	e.00	e.00	e.00	e.00	e.00	e.20	e3.2	e.70	e.00	e.00	e.00	e.00
15	e.00	e.00	e.00	e.00	e.00	e.20	e2.8	e.60	e.00	e.00	e.00	e.00
16	e.00	e.00	e.00	e.00	e.00	e.20	e2.4	e.55	e.00	e.00	e.00	e.00
17	e.00	e.00	e.00	e.00	e.00	e.20	e2.2	e.50	e.00	e.00	e.00	e.00
18	e.00	e.00	e.00	e.00	e.00	e35	e2.5	e.50	e.00	e.00	e.00	e.00
19	e.00	e.00	e.00	e.00	e.00	e130	e2.1	e.50	e.00	e.00	e.00	e.00
20	e.00	e.00	e.00	e.00	e.00	e78	e1.9	e.50	e.00	e.00	e.00	e.00
21	e.00	e.00	e.00	e.00	e.00	e36	e1.8	e.40	e.00	e.00	e.00	e.00
22	e.00	e.00	e.00	e.00	e.00	e20	e1.8	e.40	e.00	e.00	e.00	e.00
23	e.00	e.00	e.00	e.00	e.00	e14	e1.7	e.40	e.00	e.00	e.00	e.00
24	e.00	e.00	e.00	e.00	e.00	e9.0	e1.6	e.30	e.00	e.00	e.00	e.00
25	e.00	e.00	e.00	e.00	e.00	e22	e1.6	e.20	e.00	e.00	e.00	e.00
26	e.00	e.00	e.00	e.00	e.00	e28	e1.5	e.20	e.00	e.00	e.00	e.00
27	e.00	e.00	e.00	e.00	e.00	e55	e1.5	e.20	e.00	e.00	e.00	e.00
28	e.00	e.00	e.00	e.00	e11	e28	e1.4	e.10	e.00	e.00	e.00	e.00
29	e.00	e.00	e.00	e.00	---	e22	e1.4	e.10	e.00	e.00	e.00	e.00
30	e.00	e.00	e.00	e.00	---	e18	e1.3	e.10	e.00	e.00	e.00	e.00
31	e.00	---	e.00	e.00	---	e14	---	e.10	---	e.00	e.00	---
TOTAL	0.00	0.00	0.00	0.00	11.00	519.04	108.3	19.75	0.48	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.39	16.7	3.61	.64	.016	.000	.000	.000
MAX	.00	.00	.00	.00	11	130	10	1.6	.10	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.07	1.3	.10	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	22	1030	215	39	1.0	.00	.00	.00

CAL YR 1990 TOTAL 5.83 MEAN .016 MAX 1.2 MIN .00 AC-FT 12
WTR YR 1991 TOTAL 658.57 MEAN 1.80 MAX 130 MIN .00 AC-FT 1310

e Estimated.

11108080 FISH CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA

LOCATION.--Lat 34°36'09", long 118°39'43", NE 1/4 NE 1/4 sec.22, T.6 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, on right bank 700 ft upstream from confluence of Fish Creek with Castaic Creek and 8.1 mi northwest of Castaic.

DRAINAGE AREA.--27.2 mi².

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. June 1965 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 1,620 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor natural inflow to Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,260 ft³/s, estimated, Mar. 4, 1978, gage height, 4.80 ft, from information furnished by California Department of Water Resources; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 5,990 ft³/s, Feb. 24, 1969, gage height, 4.98 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 341 ft³/s, Mar. 19, gage height, 3.20 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	8.3	21	1.6	.10	.00	.00	.00
2	.00	.00	.00	.00	.00	2.9	14	1.5	.09	.00	.00	.00
3	.00	.00	.00	.00	.00	.75	11	1.4	.08	.00	.00	.00
4	.00	.00	.00	.00	.00	.44	12	1.2	.06	.00	.00	.00
5	.00	.00	.00	.00	.00	.50	9.9	1.1	.05	.00	.00	.00
6	.00	.00	.00	.00	.00	.37	8.5	1.0	.04	.00	.00	.00
7	.00	.00	.00	.00	.00	.33	7.0	.88	.03	.00	.00	.00
8	.00	.00	.00	.00	.00	.30	6.0	.90	.02	.00	.00	.00
9	.00	.00	.00	.00	.00	.29	5.9	.95	.01	.00	.00	.00
10	.00	.00	.00	.00	.00	.26	5.7	.92	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.24	5.5	.89	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.19	5.0	.85	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.24	4.7	.82	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.29	4.8	.69	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.32	4.2	.60	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.33	3.6	.54	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.31	3.3	.53	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	4.8	3.2	.51	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	135	3.1	.51	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	97	2.9	.50	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	56	2.8	.46	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	29	2.8	.42	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	21	2.6	.35	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	16	2.5	.29	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	37	2.4	.24	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	45	2.2	.20	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	92	2.0	.17	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	45	1.8	.15	.00	.00	.00	.00
29	.00	.00	.00	.00	6.8	35	1.6	.13	.00	.00	.00	.00
30	.00	.00	.00	.00	---	29	1.5	.13	.00	.00	.00	.00
31	.00	---	.00	.00	---	25	---	.12	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	6.80	683.16	163.5	20.55	0.48	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.24	22.0	5.45	.66	.016	.000	.000	.000
MAX	.00	.00	.00	.00	6.8	135	21	1.6	.10	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.19	1.5	.12	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	13	1360	324	41	1.0	.00	.00	.00

CAL YR 1990 TOTAL 1.00 MEAN .003 MAX 1.0 MIN .00 AC-FT 2.0
WTR YR 1991 TOTAL 874.49 MEAN 2.40 MAX 135 MIN .00 AC-FT 1730

11108090 ELDERBERRY CANYON CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA

LOCATION.--Lat 34°34'20", long 118°37'28", in NW 1/4 NW 1/4 sec.31, T.6 N., R.31 W., Los Angeles County, Hydrologic Unit 18070102, on right bank 2.8 mi southeast of Castaic powerplant, and 5.5 mi northwest of Castaic.

DRAINAGE AREA.--2.50 mi².

PERIOD OF RECORD.--October 1977 to September 1978, October 1988 to current year. October 1966 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 1,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor natural inflow into Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft³/s, estimated, Mar. 4, 1978, gage height, 6.00 ft, from information furnished by California Department of Water Resources; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39 ft³/s, Mar. 1, gage height, 2.61 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	11	1.0	.01	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	1.3	.82	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.50	.61	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.31	.49	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.28	.40	.01	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.17	.35	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.11	.30	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.06	.26	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.03	.21	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.03	.17	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.02	.15	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.02	.13	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.02	.12	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.02	.10	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.02	.10	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.02	.09	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.02	.08	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.22	.08	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	10	.06	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	11	.05	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	4.8	.04	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	2.2	.04	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	1.3	.03	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.86	.03	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	6.8	.02	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	7.3	.02	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	11	.02	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	6.1	4.5	.01	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	2.5	.01	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1.8	.01	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	1.3	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	6.10	79.51	5.80	0.02	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.22	2.56	.19	.001	.000	.000	.000	.000
MAX	.00	.00	.00	.00	6.1	11	1.0	.01	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.02	.01	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	12	158	12	.04	.00	.00	.00	.00

CAL YR 1990 TOTAL 3.97 MEAN .011 MAX 1.7 MIN .00 AC-FT 7.9
WTR YR 1991 TOTAL 91.43 MEAN .25 MAX 11 MIN .00 AC-FT 181

SANTA CLARA RIVER BASIN

11108095 NECKTIE CANYON CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA

LOCATION.-- Lat 34°33'38", long 118°36'51", in SW 1/4 SE 1/4 sec.31, T.6 N., R.16 W., Los Angeles County, Hydrologic Unit 18070102, on right bank 4.7 mi southeast of Castaic powerplant, and 5 mi north of Castaic.

DRAINAGE AREA.--2.12 mi².

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. February 1967 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 1,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor natural inflow to Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,200 ft³/s, estimated, Mar. 4, 1978, gage height, 5.10 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30 ft³/s, Mar. 1, 19, 20, 26, gage height, 1.99 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	14	1.3	.08	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	1.5	.99	.09	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.49	.80	.09	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.22	.61	.08	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.23	.53	.06	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.13	.46	.05	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.09	.43	.04	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.07	.37	.04	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.06	.33	.04	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.05	.29	.03	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.04	.29	.03	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.03	.27	.03	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.08	.25	.03	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.05	.23	.03	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.04	.24	.02	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.03	.21	.02	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.02	.22	.02	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.25	.21	.01	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	16	.20	.01	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	16	.18	.01	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	6.6	.17	.01	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	2.9	.17	.01	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	1.7	.15	.01	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	1.2	.13	.01	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	7.8	.13	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	11	.11	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	18	.09	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	9.1	6.2	.08	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	3.7	.07	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	2.4	.07	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	1.7	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	9.10	112.58	9.58	0.85	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.32	3.63	.32	.027	.000	.000	.000	.000
MAX	.00	.00	.00	.00	9.1	18	1.3	.09	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.02	.07	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	18	223	19	1.7	.00	.00	.00	.00

CAL YR 1990 TOTAL 4.31 MEAN .012 MAX 1.8 MIN .00 AC-FT 8.5
WTR YR 1991 TOTAL 132.11 MEAN .36 MAX 18 MIN .00 AC-FT 262

11108130 ELIZABETH LAKE CANYON CREEK ABOVE CASTAIC LAKE, NEAR CASTAIC, CA

LOCATION.--Lat 34°34'46", long 118°33'15", unsurveyed, Los Angeles County, Hydrologic Unit 18070102, on left bank 0.4 mi northeast of Elizabeth Lake Guard Station, and 7.0 mi northeast of Castaic on Lake Hughes Road.

DRAINAGE AREA.--43.7 mi², excludes 18.1 mi² of noncontributing area in Elizabeth and Hughes Lake basins.

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. January 1962 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 1,680 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor inflow into Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,800 ft³/s, Feb. 9, 1978, gage height, 5.79 ft; no flow for many days in water years 1977, and 1989-91.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s, estimated, Jan. 25, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 318 ft³/s, Mar. 27, gage height, 2.85 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.29	.28	117	20	2.6	.92	.28	.00	.00
2	.00	.00	.00	.29	.28	15	17	2.6	.81	.23	.00	.00
3	.00	.00	.00	.33	.28	5.6	14	2.5	.74	.20	.00	.00
4	.00	.00	.00	.53	.29	3.2	13	2.2	.65	.16	.00	.00
5	.00	.00	.00	.61	.29	2.7	11	2.0	.62	.15	.00	.00
6	.00	.00	.00	.45	.29	2.5	9.9	1.9	.55	.13	.00	.00
7	.00	.00	.00	.38	.28	2.3	10	1.7	.49	.12	.00	.00
8	.00	.00	.00	.36	.28	2.0	11	1.6	.41	.12	.00	.00
9	.00	.00	.00	.40	.27	1.9	9.2	1.6	.39	.10	.00	.00
10	.00	.00	.07	.43	.26	1.8	8.2	1.7	.33	.06	.00	.00
11	.00	.00	.10	.34	.27	1.7	6.8	1.6	.33	.03	.00	.00
12	.00	.00	.12	.29	.26	1.6	5.4	1.5	.30	.02	.00	.00
13	.00	.00	.15	.28	.26	2.4	4.9	1.5	.30	.02	.00	.00
14	.00	.00	.18	.27	.25	2.3	5.3	1.4	.30	.02	.00	.00
15	.00	.00	.22	.27	.25	2.2	6.3	1.3	.31	.02	.00	.00
16	.00	.00	.24	.25	.27	2.0	5.7	1.2	.25	.02	.00	.00
17	.00	.00	.25	.23	.27	1.8	5.2	1.1	.24	.02	.00	.00
18	.00	.00	.29	.22	.24	3.7	5.0	1.1	.21	.02	.00	.00
19	.00	.00	.31	.22	.24	69	4.7	1.1	.20	.02	.00	.00
20	.00	.00	.29	.23	.24	109	4.4	1.1	.23	.02	.00	.00
21	.00	.00	.29	.24	.24	48	4.1	1.2	.26	.01	.00	.00
22	.00	.00	.29	.23	.24	27	4.1	1.2	.20	.01	.00	.00
23	.00	.00	.28	.22	.23	17	3.9	1.1	.21	.00	.00	.00
24	.00	.00	.29	.22	.23	15	3.8	1.1	.25	.00	.00	.00
25	.00	.00	.25	.27	.24	48	3.6	1.1	.27	.00	.00	.00
26	.00	.00	.26	.29	.23	85	3.4	1.1	.29	.00	.00	.00
27	.00	.00	.27	.29	2.2	146	3.2	1.1	.29	.00	.00	.00
28	.00	.00	.29	.31	48	58	2.9	1.2	.34	.00	.00	.00
29	.00	.00	.32	.31	---	33	2.8	1.1	.40	.00	.00	.00
30	.00	.00	.32	.29	---	21	2.6	1.2	.34	.00	.00	.00
31	.00	---	.31	.28	---	16	---	1.1	---	.00	.00	---
TOTAL	0.00	0.00	5.39	9.62	56.96	863.7	211.4	45.8	11.43	1.78	0.00	0.00
MEAN	.000	.000	.17	.31	2.03	27.9	7.05	1.48	.38	.057	.000	.000
MAX	.00	.00	.32	.61	48	146	20	2.6	.92	.28	.00	.00
MIN	.00	.00	.00	.22	.23	1.6	2.6	1.1	.20	.00	.00	.00
AC-FT	.00	.00	11	19	113	1710	419	91	23	3.5	.00	.00

CAL YR 1990 TOTAL 236.38 MEAN .65 MAX 49 MIN .00 AC-FT 469
WTR YR 1991 TOTAL 1206.08 MEAN 3.30 MAX 146 MIN .00 AC-FT 2390

11108133 CASTAIC LAKE NEAR CASTAIC, CA

LOCATION.--Lat 34°31'18", long 118°36'18", in SW 1/4 NW 1/4 sec.18, T.5 N., R.16 W., Los Angeles County, Hydrologic Unit 18070102, on center of upstream face of Castaic Dam and 3.0 mi north of Castaic.

DRAINAGE AREA.--137 mi², excludes 18.1 mi² non-contributing area in Elizabeth Canyon Creek basin.

PERIOD OF RECORD.--October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by earthfill dam. Storage began April 1972. Dead storage below outlet tower to downstream distribution system, 1,799 acre-ft, elevation, 1,213 ft. Capacity below spillway level, 323,699 acre-ft, elevation 1,515 ft. Lake receives natural inflow from Castaic Creek and its tributaries, and water diverted from Pyramid Lake through Angeles Tunnel. Water is released downstream through Castaic Tunnel No. 1 and to Castaic Lagoon. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 319,424 acre-ft, Apr. 12, 1990, elevation, 1,513.08 ft; minimum, 147,551 acre-ft, Nov. 8, 1988, elevation, 1,419.08 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 313,864 acre-ft, Aug. 23, elevation, 1,510.56 ft; minimum, 167,697 acre-ft, Mar. 4, elevation, 1,432.38 ft.

Capacity table (elevation in feet, and contents, in acre-feet)
(Based on data provided by California Department of Water Resources in 1978.)

1430	163,995	1470	231,964	1500	291,186
1440	179,830	1480	250,894	1510	310,451
1450	196,414	1490	270,629	1520	334,985
1460	213,807				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	269867	278745	246086	204473	193857	168198	176554	185886	221362	277519	290619	309405
2	272845	282588	243682	202394	192829	168088	176619	184915	221037	282361	291396	308166
3	271334	280139	241215	200825	191821	167885	179019	183964	223450	285901	290179	308752
4	271999	277621	242390	199640	190482	167697	181386	183081	226843	286442	289216	311084
5	272160	279360	242846	198374	191469	170555	181419	182135	229875	285548	291922	310909
6	269665	280612	242808	197128	192040	170303	181451	183244	234007	284698	296125	310887
7	267218	281352	243606	195887	193031	170177	181403	184111	237578	283807	296635	309427
8	268521	285465	241310	196839	193806	170051	184521	184472	237015	286317	299552	308036
9	268480	285112	238969	197742	192611	169941	187108	184046	236191	285465	300535	306583
10	269143	282733	236697	196652	191302	169783	187290	183669	237450	284615	299530	309079
11	269706	280283	237015	195565	189815	169705	190349	183277	239383	283807	298549	311870
12	269123	280550	238066	194448	188268	169689	190282	182901	240629	282939	299765	312790
13	266678	280160	238593	193385	186794	169752	190265	185261	245971	282032	301392	311368
14	264246	280756	236322	192308	185343	169720	190265	186942	247446	281002	300385	309949
15	266199	280098	234045	192913	183882	169752	191185	188400	246929	281085	302529	308492
16	267919	277682	231705	194347	182444	169720	191118	191101	246584	280201	303260	307038
17	270891	275299	232706	193216	181094	169705	190967	193503	249388	281887	302185	305631
18	271757	272908	233263	195159	179779	170004	190666	193031	251919	283105	301199	307775
19	273879	273595	230928	193941	178357	170240	190282	192594	254659	282052	302615	310822
20	271414	273049	228770	192712	177020	170571	189989	192998	257552	281023	305588	311542
21	268842	270571	226641	191436	175801	172327	189581	200292	259045	280037	308209	310080
22	271495	268119	224487	193351	174618	174841	189265	206179	258710	279175	310516	308535
23	272403	265720	222360	194752	173545	174873	188866	208120	258357	281743	313864	306930
24	274304	263293	220747	196482	172089	174969	188517	207192	261095	283621	312724	305351
25	275950	260818	218907	198032	170697	175241	188218	206248	266918	285631	311608	303798
26	278132	258435	217648	196550	169327	175737	187836	205325	269484	287483	310582	302228
27	275706	255966	215428	195023	168370	176169	187422	204386	271696	286650	309623	300642
28	273171	253452	213238	195531	167916	176282	186942	206528	274304	285735	311739	299040
29	273434	251029	211042	194009	---	176410	187555	212954	274386	286525	313491	297633
30	277172	248560	208752	196363	---	176442	186761	219718	274082	289216	312045	296189
31	277866	---	206580	195006	---	176506	---	221743	---	289551	310669	---
MAX	278132	285465	246086	204473	193857	176506	191185	221743	274386	289551	313864	312790
MIN	264246	248560	206580	191436	167916	167697	176554	182135	221037	277519	289216	296189
a	1493.57	1478.79	1455.90	1449.17	1432.52	1437.94	1444.24	1464.42	1491.71	1499.22	1509.10	1502.37
b	+9726	-29306	-41980	-11574	-27090	+8590	+10255	+34982	+52339	+15469	+21118	-14480

CAL YR 1990 b -10190
WTR YR 1991 b +28049

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11108135 CASTAIC LAGOON PARSHALL FLUME NEAR CASTAIC, CA

LOCATION.--Lat 34°29'50", long 118°36'49", in SW 1/4 SE 1/4 sec.24, T.5 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, at southeast end of lagoon under Lake Hughes Road bridge, 0.5 mi east of Castaic on Lake Hughes Road.

DRAINAGE AREA.--138 mi², excludes 18.1 mi² noncontributing area in Elizabeth Canyon Creek basin.

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. June 1972 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 1,140 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor outflow from Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 195 ft³/s, estimated, June 30, 1978; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 7,670 ft³/s, Mar. 2, 1983, gage height, 4.10 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--No flow for 1991 water year.

SANTA CLARA RIVER BASIN

11108500 SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CA

LOCATION.--Lat 34°23'59", long 118°42'14", in San Francisco Grant, Ventura County, Hydrologic Unit 18070102, on downstream end of old diversion weir on right bank, on private road 0.2 mi south of Highway 126, 0.8 mi west of Los Angeles-Ventura County line, and 6.4 mi west of intersection of Highway 126 and Interstate 5.
DRAINAGE AREA.--625 mi².

PERIOD OF RECORD.--October 1952 to current year.

CHEMICAL DATA: Water years 1969, 1972-88.

BIOLOGICAL DATA: Water years 1979-80.

WATER TEMPERATURE: Water years 1969-78 (observed), February to September 1980.

SEDIMENT DATA: Water years 1969-88.

REVISED RECORDS.--WDR CA-78-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 794.93 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records poor. Base flow affected by pumping from wells along stream for irrigation. Flow partly regulated since January 1972 by Castaic Lake (station 11108133), capacity, 324,000 acre-ft. Imported water from California Water Project stored and released at Castaic Dam.

AVERAGE DISCHARGE.--39 years, 48.2 ft³/s, 34,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,800 ft³/s, Jan. 25, 1969, gage height, 19.01 ft, from rating curve extended above 9,200 ft³/s on basis of field estimate of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0715	*6,960	*11.47	Mar. 26	2215	4,750	10.54
Mar. 20	0930	6,050	11.12				

Minimum daily, 12 ft³/s, Sept. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	26	25	29	29	1790	40	28	22	19	14	13
2	29	28	25	30	25	90	38	28	21	19	13	12
3	28	31	27	44	26	48	36	28	21	18	13	14
4	28	31	25	50	25	44	35	27	19	18	14	14
5	27	31	21	40	22	43	35	28	18	20	13	14
6	26	32	21	35	22	39	35	28	18	20	13	13
7	26	36	24	36	21	34	34	25	17	21	13	13
8	26	42	26	34	23	36	34	25	18	22	13	14
9	24	47	26	38	32	31	33	25	19	21	13	16
10	25	45	26	35	30	29	32	24	18	20	13	15
11	26	35	25	35	23	28	31	24	18	20	13	15
12	25	32	26	35	22	25	30	24	17	19	14	15
13	26	31	25	35	21	34	28	25	18	19	14	16
14	27	30	26	36	24	37	28	23	18	18	15	16
15	29	28	26	35	27	40	29	23	18	20	14	16
16	28	27	27	33	27	33	28	22	18	19	14	17
17	28	27	27	32	27	31	27	23	20	20	13	16
18	29	27	27	33	29	62	27	24	19	20	13	15
19	28	28	27	32	30	1110	27	25	19	21	14	15
20	27	56	26	32	29	1310	27	27	19	20	14	16
21	27	39	27	32	29	141	28	26	20	20	13	16
22	27	36	27	30	29	65	30	26	20	20	13	16
23	26	34	27	29	29	51	30	24	19	18	13	18
24	26	31	29	29	30	36	30	23	19	18	13	17
25	26	30	27	28	31	364	30	22	19	17	13	16
26	26	29	27	29	32	821	29	23	18	16	14	16
27	28	26	26	30	122	1390	29	24	17	15	14	17
28	27	26	26	30	807	130	28	24	18	15	14	16
29	29	25	25	30	---	73	30	23	18	15	14	16
30	27	24	26	29	---	50	28	23	18	14	14	17
31	28	---	28	29	---	42	---	22	---	15	14	---
TOTAL	837	970	803	1034	1623	8057	926	766	561	577	419	460
MEAN	27.0	32.3	25.9	33.4	58.0	260	30.9	24.7	18.7	18.6	13.5	15.3
MAX	29	56	29	50	807	1790	40	28	22	22	15	18
MIN	24	24	21	28	21	25	27	22	17	14	13	12
AC-FT	1660	1920	1590	2050	3220	15980	1840	1520	1110	1140	831	912

CAL YR 1990 TOTAL 11834 MEAN 32.4 MAX 440 MIN 20 AC-FT 23470
WTR YR 1991 TOTAL 17033 MEAN 46.7 MAX 1790 MIN 12 AC-FT 33780

11109375 PIRU CREEK BELOW BUCK CREEK, NEAR PYRAMID LAKE, CA

LOCATION.--Lat 34°39'58", long 118°49'24", in SE 1/4 SE 1/4 sec.30, T.7 N., R.18 W., Ventura County, Hydrologic Unit 18070102, on left bank 300 ft downstream from the confluence of Piru Creek and Buck Creek and 2.3 mi southeast of U.S. Forest Service Hardluck Campground.

DRAINAGE AREA.--198 mi².

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. February 1975 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 2,700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor flow into Pyramid Lake.

COOPERATION.--Records were provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s, estimated, Mar. 4, 1978, gage height, 10.08 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 840 ft³/s, Mar. 18, gage height, 5.20 ft; no flow Oct. 1-11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.1	1.6	1.8	2.0	274	338	40	9.2	3.0	.59	.23
2	.00	1.2	1.6	2.1	2.1	109	290	39	8.7	2.5	.99	.21
3	.00	1.2	1.6	3.6	2.2	34	307	35	8.5	2.0	.70	.19
4	.00	1.3	1.6	4.6	2.2	20	327	30	8.1	1.7	.62	.18
5	.00	1.3	1.6	3.8	2.2	54	341	27	8.2	1.6	.63	.18
6	.00	1.3	1.6	3.0	2.2	22	329	26	7.5	1.5	.68	.19
7	.00	1.3	1.6	2.5	2.2	15	284	25	7.2	1.4	.68	.14
8	.00	1.3	1.5	2.3	2.1	12	207	25	6.8	1.5	.64	2.9
9	.00	1.3	1.5	2.4	2.1	11	175	23	6.4	1.8	.56	1.6
10	.00	1.3	1.6	2.6	2.1	9.9	166	22	5.9	1.7	.49	1.3
11	.00	1.3	1.6	2.3	2.1	9.1	128	21	5.5	1.5	.45	1.1
12	.35	1.3	1.6	2.1	2.2	8.5	97	19	5.1	1.4	.49	1.0
13	.58	1.3	1.7	2.1	2.2	8.6	84	17	4.9	1.3	.74	.84
14	.62	1.3	1.7	2.0	2.1	9.8	81	17	4.7	1.1	.89	.78
15	.63	1.4	1.7	2.0	2.1	8.8	85	16	4.4	1.0	.96	.66
16	.66	1.4	1.7	2.0	2.1	7.9	82	15	4.0	.88	.88	.56
17	.68	1.5	1.7	2.0	2.0	7.5	73	15	3.6	.82	.79	.50
18	.73	1.5	1.8	2.0	2.0	219	65	15	3.3	.82	.77	.45
19	.78	1.6	1.9	2.0	1.9	354	63	14	3.3	.86	.66	.43
20	.81	1.9	1.9	2.0	1.9	225	62	14	3.2	.84	.54	.44
21	.81	1.8	1.8	2.0	1.8	124	61	13	3.0	.76	.45	.45
22	.87	1.7	1.2	2.0	1.7	85	57	13	2.9	.65	.41	.46
23	.90	1.7	1.2	2.0	1.6	109	54	12	2.9	.55	.37	.45
24	.88	1.7	1.2	1.9	1.5	124	56	11	3.0	.51	.34	.46
25	.81	1.6	1.4	2.0	1.5	192	56	11	3.1	.49	.32	.44
26	.78	1.6	1.4	2.0	1.3	163	50	11	3.0	.46	.31	.42
27	.80	1.6	1.7	2.0	1.5	157	44	10	3.0	.40	.30	.41
28	.86	1.7	2.0	2.0	1.17	119	42	9.8	3.5	.31	.29	.43
29	.92	1.7	1.9	1.9	---	168	39	9.6	4.2	.27	.26	.47
30	.96	1.6	1.8	1.9	---	243	40	9.5	3.8	.26	.25	.50
31	1.0	---	1.6	1.9	---	329	---	9.4	---	.28	.26	---
TOTAL	15.43	43.8	50.3	70.8	183.4	3232.1	4083	574.3	150.9	34.16	17.31	32.23
MEAN	.50	1.46	1.62	2.28	6.55	104	136	18.5	5.03	1.10	.56	1.07
MAX	1.0	1.9	2.0	4.6	117	354	341	40	9.2	3.0	.99	.14
MIN	.00	1.1	1.2	1.8	1.3	7.5	39	9.4	2.9	.26	.25	.18
AC-FT	31	87	100	140	364	6410	8100	1140	299	68	34	64

CAL YR 1990 TOTAL 796.33 MEAN 2.18 MAX 90 MIN .00 AC-FT 1580
WTR YR 1991 TOTAL 8487.73 MEAN 23.3 MAX 354 MIN .00 AC-FT 16840

11109395 CANADA DE LOS ALAMOS ABOVE PYRAMID LAKE, CA

LOCATION.--Lat 34°41'31", long 118°47'25", in SW 1/4 SE 1/4 sec.16, T.7 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, on right bank 1.1 mi south of Hungry Valley road off ramp from Interstate Highway 5 and 0.4 mi above Pyramid Landing on Pyramid Lake.

DRAINAGE AREA.--61.9 mi².

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. March 1965 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 2,800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor natural inflow to Pyramid Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft³/s, Feb. 10, 1978, gage height, 5.10 ft; minimum daily, 0.30 ft³/s, May 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 731 ft³/s, Mar. 18, gage height, 4.45 ft; minimum daily, 0.94 ft³/s, Aug. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.6	3.2	2.5	2.8	11	2.7	2.7	2.1	2.1	1.2	1.4
2	1.7	2.6	3.2	2.5	2.8	2.9	2.6	2.7	2.1	1.6	.94	1.3
3	1.5	2.5	3.2	3.8	2.8	2.6	2.6	2.4	2.0	1.5	1.0	1.3
4	1.5	2.6	3.2	3.5	2.8	2.6	2.7	2.2	2.0	1.3	1.2	1.3
5	1.6	2.7	3.0	3.0	2.8	2.5	2.8	2.1	1.9	1.4	1.5	1.4
6	1.8	2.6	3.0	2.7	2.8	2.5	2.8	2.1	1.8	1.4	1.5	1.9
7	1.7	2.6	3.0	2.6	2.7	2.5	2.6	1.9	1.9	1.5	1.4	1.7
8	1.7	2.5	3.0	2.8	2.7	2.5	2.8	2.0	1.9	1.8	1.4	1.5
9	1.7	2.4	3.0	3.2	2.7	2.5	2.8	2.0	1.8	1.8	1.4	1.8
10	1.7	2.4	3.0	3.0	2.7	2.4	2.7	2.0	1.7	1.7	1.3	1.9
11	1.8	2.4	2.8	2.8	2.7	2.5	2.8	2.1	1.8	1.7	1.3	1.8
12	1.8	2.4	3.0	3.0	2.6	2.6	3.0	2.0	1.9	1.5	1.8	1.7
13	1.8	2.5	3.0	3.0	2.6	3.4	3.0	2.1	2.1	1.4	2.0	1.7
14	1.9	2.5	3.0	3.0	2.6	2.6	3.0	2.0	2.2	1.4	2.1	1.6
15	2.0	2.5	3.0	3.1	2.6	2.7	3.2	1.8	2.1	1.3	1.8	1.6
16	2.1	2.6	3.0	3.4	2.6	2.5	3.3	1.9	2.2	1.1	1.6	1.5
17	2.1	2.6	2.8	3.1	2.6	16	3.2	1.8	2.1	1.1	1.6	1.5
18	2.2	2.6	2.8	3.0	2.5	181	3.2	1.9	2.1	1.3	1.6	1.4
19	2.4	2.7	2.8	3.0	2.5	40	3.2	2.0	2.1	1.5	1.5	1.5
20	2.3	3.6	2.8	3.0	2.6	19	3.3	2.0	1.9	1.6	1.4	1.5
21	2.1	2.9	2.8	3.0	2.6	3.6	3.3	1.9	2.1	1.4	1.4	1.7
22	2.1	2.8	2.8	3.0	2.6	3.2	3.0	1.6	2.0	1.3	1.3	1.7
23	2.1	2.8	2.6	3.0	2.6	3.1	2.9	1.7	2.0	1.2	1.3	1.7
24	2.0	2.8	2.6	3.0	2.6	5.2	3.0	1.6	2.3	1.2	1.3	1.7
25	2.1	2.8	2.6	2.8	2.6	7.0	2.9	1.5	2.2	1.3	1.3	1.7
26	2.1	3.0	2.6	2.8	2.6	10	2.8	1.8	2.2	1.3	1.3	1.6
27	2.1	3.0	2.6	2.8	11	4.8	2.8	1.8	2.4	1.2	1.5	1.6
28	2.2	3.2	2.6	2.8	14	3.2	2.5	1.7	2.8	1.3	1.5	1.8
29	2.2	3.2	2.5	2.8	---	2.8	2.5	1.7	2.7	1.3	1.5	1.8
30	2.3	3.2	2.5	2.8	---	2.7	2.6	2.0	2.4	1.3	1.5	1.8
31	2.5	---	2.5	2.8	---	2.7	---	1.9	---	1.5	1.5	---
TOTAL	60.6	81.6	88.5	91.6	94.1	354.6	86.6	60.9	62.8	44.3	44.94	48.4
MEAN	1.95	2.72	2.85	2.95	3.36	11.4	2.89	1.96	2.09	1.43	1.45	1.61
MAX	2.5	3.6	3.2	3.8	14	181	3.3	2.7	2.8	2.1	2.1	1.9
MIN	1.5	2.4	2.5	2.5	2.5	2.4	2.5	1.5	1.7	1.1	.94	1.3
AC-FT	120	162	176	182	187	703	172	121	125	88	89	96

CAL YR 1990 TOTAL 867.1 MEAN 2.38 MAX 6.9 MIN 1.1 AC-FT 1720
WTR YR 1991 TOTAL 1118.94 MEAN 3.07 MAX 181 MIN .94 AC-FT 2220

11109520 PYRAMID LAKE NEAR GORMAN, CA

LOCATION.--Lat 34°38'41", long 118°45'47", in NW 1/4 NW 1/4 sec.2, T.6 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, on center of upstream face of Pyramid Dam and 11.5 mi southeast of Gorman.
DRAINAGE AREA.--295 mi².

PERIOD OF RECORD.--October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam. Storage began August 1974. Dead storage below outlet to Angeles Tunnel, 5,720 acre-ft, elevation 2,345 ft, included in contents. Capacity below invert of radial gate, 133,600 acre-ft, elevation 2,547.72 ft; below top of radial gate, 169,901 acre-ft, elevation, 2,578 ft; below spillway level, 171,196 acre-ft, elevation, 2,579 ft. Lake receives natural flow from Piru Creek, Canada de Los Alamos, and imported water from West Branch California Aqueduct. Water is released through the Angeles Tunnel to Castaic powerplant and during periods of low electricity demand water from Elderberry Forebay is pumped back to Pyramid Lake. Water is also released to Piru Creek to satisfy minimum fishwater release requirements (see station 11109525). Records, including extremes, represent contents at 2400 hours.

COOPERATION.--Records provided by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (at 2400) FOR PERIOD OF RECORD.--Maximum contents, 170,043 acre-ft, Nov. 5, 1989; elevation, 2,578.11 ft; minimum, 147,633 acre-ft, July 20, 1990, elevation, 2,559.96 ft.
EXTREMES (at 2400) FOR CURRENT YEAR.--Maximum contents, 168,999 acre-ft, May 28, elevation, 2,577.30 ft; minimum, 151,445 acre-ft, July 19, elevation, 2,571.34 ft.

Capacity table (elevation in feet, and contents, in acre-feet)
(Based on data provided by California Department of Water Resources in 1978.)

2545	130,601	2565	153,364
2550	136,154	2570	159,778
2555	141,850	2575	166,057
2560	147,680	2580	172,497

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165828	163614	158270	166847	161508	167690	167856	165828	164498	164270	163287	166171
2	164687	164081	160735	163287	161583	167396	166044	165688	165638	163212	161908	168087
3	163728	165714	157384	159456	164877	167780	164687	165587	163766	162559	164586	164270
4	162020	168845	155451	158393	164902	166031	162584	165460	162308	166362	168138	164283
5	161733	162145	157851	161358	162484	165892	161009	165244	161221	161171	164586	162910
6	163892	160909	159691	165219	159097	164687	164573	162484	160436	163640	160772	159977
7	167626	158184	159629	163778	158393	165232	168344	161408	157642	168318	158060	162133
8	164675	157876	162220	164371	157274	165143	166120	161858	160536	164068	154418	163312
9	163993	155695	167728	162220	157814	164270	165358	161520	162986	161745	152460	164220
10	162070	162208	163023	161470	159369	165118	165105	162873	162546	159977	157053	163627
11	160150	166847	162383	159555	158184	165752	163614	164157	161046	158122	162835	163174
12	156636	163967	162133	160275	158331	165396	161158	165320	160299	155744	162760	164485
13	160635	162045	161021	167575	168402	162760	162296	164093	158652	157433	157433	163892
14	165638	159382	157925	166592	159654	163829	164573	161570	158097	161645	159419	162747
15	160399	158467	160536	166541	159592	163841	164043	159332	160859	158023	159122	164270
16	158924	158479	165511	166210	160672	163778	163564	155196	163854	157482	159877	164599
17	157581	161358	164359	163551	165853	164890	163589	152388	162571	159642	162785	162973
18	155964	166681	161720	160324	168369	166159	163602	154115	161920	160523	165803	162910
19	156294	165042	157274	162647	165599	165942	164207	158381	161683	151445	165105	159332
20	156759	161221	158874	166528	163929	166847	164106	159481	160697	152622	164207	154272
21	160660	158689	157765	168613	163690	165981	164890	157581	159184	165676	162747	156025
22	162647	161958	159964	166273	163275	165232	166630	158073	160685	165143	161783	158813
23	163753	163463	158147	163489	164852	161758	166464	157839	165143	163791	157531	153099
24	161046	165156	163539	160635	166745	163312	166260	158751	164953	162371	161034	154782
25	158665	167140	167268	157851	166375	165460	165080	161770	165270	161445	166273	158677
26	157396	166184	166757	160399	166553	165701	164776	164712	163589	160411	164826	157335
27	163011	165308	161708	165777	166872	162910	165968	167780	162058	161833	163703	157556
28	167882	162033	156098	166375	166757	163099	167921	168999	160897	166485	163174	160262
29	166400	158492	158615	163917	---	163287	166859	162494	163627	165067	162496	164157
30	163955	157188	160573	162346	---	164662	165958	160598	165930	164169	162258	164384
31	165346	---	163489	160125	---	168138	---	161483	---	163149	163740	---
MAX	167882	168845	167728	168613	168369	168138	168344	168999	165930	168318	168138	168087
MIN	155964	155695	155451	157851	157274	161758	161009	152388	157642	151445	152460	153099
a	2574.44	2567.90	2572.97	2570.28	2575.55	2576.63	2574.93	2571.37	2574.90	2572.70	2573.17	2573.68
b	+2724	-8158	+6301	-3364	+6632	+1381	-2180	-4475	+4447	-2781	+591	+644

CAL YR 1990 b +6363
WTR YR 1991 b +1762

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11109525 PIRU CREEK BELOW PYRAMID LAKE, NEAR GORMAN, CA

LOCATION.--Lat 34°38'30", long 118°45'49", in SW 1/4 NW 1/4 sec.2, T.61 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, at downstream base of dam and 11.7 mi southeast of Gorman.

DRAINAGE AREA.--295 mi².

PERIOD OF RECORD.--October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.--Flow meters with totalizer. Elevation of gage is 2,200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated beginning December 1971 by Pyramid Lake, capacity, 171,196 acre-ft. Station is operated to satisfy fishwater release requirements as prescribed by the Federal Energy Regulatory Commission.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 400 ft³/s, Mar. 21, 1991; minimum daily, 5.0 ft³/s, many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 400 ft³/s, Mar. 21,; minimum daily, 5.0 ft³/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	10	25	5.0	5.0	5.0	50	100	40	40	20	25
2	15	10	25	5.0	5.0	5.0	50	100	40	40	15	25
3	20	10	25	5.0	5.0	5.0	50	100	40	40	20	25
4	20	10	25	5.0	5.0	5.0	50	100	40	40	15	25
5	20	10	35	5.0	5.0	51	50	100	40	40	20	20
6	10	10	35	5.0	5.0	105	51	100	40	40	15	25
7	10	10	35	5.0	5.0	105	50	100	40	40	20	15
8	10	10	45	5.0	5.0	105	50	120	40	25	25	20
9	10	10	45	5.0	5.0	105	50	125	40	33	20	15
10	10	10	45	5.0	5.0	105	50	125	40	33	25	10
11	15	25	45	5.0	5.0	105	50	125	40	28	20	15
12	15	25	55	5.0	5.0	105	50	125	40	28	10	15
13	15	25	55	5.0	5.0	10	50	125	40	28	15	20
14	10	25	55	5.0	5.0	10	50	125	40	28	10	20
15	15	60	55	5.0	5.0	10	50	125	40	28	15	20
16	10	60	60	5.0	5.0	10	50	125	40	25	15	20
17	10	60	60	5.0	5.0	10	50	125	40	25	15	25
18	10	60	60	5.0	5.0	5.0	50	125	40	25	20	25
19	10	70	60	5.0	5.0	185	50	125	40	25	15	25
20	10	70	60	5.0	5.0	390	51	125	40	25	20	25
21	10	70	55	5.0	5.0	400	50	125	40	25	20	20
22	10	70	55	5.0	5.0	105	50	125	40	25	25	25
23	10	95	55	5.0	5.0	107	55	125	40	25	25	25
24	15	95	30	5.0	5.0	110	100	40	40	25	25	25
25	10	95	30	5.0	5.0	105	100	40	40	25	25	25
26	15	95	5.0	5.0	5.0	105	100	40	40	15	25	25
27	15	82	5.0	5.0	5.0	105	100	40	40	25	20	20
28	15	82	5.0	5.0	5.0	51	100	40	40	20	20	15
29	15	82	5.0	5.0	---	50	100	40	40	20	15	20
30	15	83	5.0	5.0	---	51	100	40	40	25	25	25
31	10	---	5.0	5.0	---	51	---	40	---	15	25	---
TOTAL	400	1429	1160.0	155.0	140.0	2676.0	1857	3015	1200	881	600	640
MEAN	12.9	47.6	37.4	5.00	5.00	86.3	61.9	97.3	40.0	28.4	19.4	21.3
MAX	20	95	60	5.0	5.0	400	100	125	40	40	25	25
MIN	10	10	5.0	5.0	5.0	5.0	50	40	40	15	10	10
AC-FT	793	2830	2300	307	278	5310	3680	5980	2380	1750	1190	1270

CAL YR 1990 TOTAL 6169.5 MEAN 16.9 MAX 95 MIN 5.0 AC-FT 12240
WTR YR 1991 TOTAL 14153.0 MEAN 38.8 MAX 400 MIN 5.0 AC-FT 28070

11109600 PIRU CREEK ABOVE LAKE PIRU, CA

LOCATION.--Lat 34°31'23", long 118°45'22", in NE 1/4 NW 1/4 sec.15, T.5 N., R.18 W., Ventura County, Hydrologic Unit 18070102, on left bank near Blue Point, 1.3 mi downstream from Agua Blanca Creek, 4.3 mi upstream from Santa Felicia Dam, 8.0 mi northeast of Piru, and 15 mi downstream from Pyramid Dam.

DRAINAGE AREA.--372 mi².

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,058.55 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Forest Service). Prior to Dec. 15, 1972, at site 0.3 mi upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated beginning December 1971 by Pyramid Lake, capacity, 171,196 acre-ft. Imported water from the California Water Project stored and released at Pyramid Dam.

AVERAGE DISCHARGE.--16 years (water years 1956-71), 55.1 ft³/s, 39,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,200 ft³/s, Feb. 25, 1969, gage height, 18.6 ft, site and datum then in use, from floodmarks, from rating curve extended above 4,000 ft³/s on basis of slope-area measurement at gage height 12.2 ft and inflow-outflow records for Lake Piru; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 35,000 ft³/s, and is the greatest since that date.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,430 ft³/s, Mar. 19, gage height, 7.00 ft; minimum daily, 3.4 ft³/s, Feb.25, 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	8.1	46	5.2	4.8	188	e90	108	49	55	9.6	13
2	13	7.3	30	5.0	4.7	58	e100	108	47	55	10	9.9
3	13	7.0	22	8.0	4.7	33	108	107	46	56	9.0	9.6
4	8.7	7.0	20	10	4.7	29	101	105	46	55	10	9.8
5	11	7.0	20	7.8	4.7	46	99	105	46	52	11	9.7
6	11	7.5	30	5.9	4.5	62	97	103	45	47	9.9	9.0
7	8.5	7.8	35	5.6	4.5	85	94	102	44	42	8.2	8.1
8	8.0	7.4	34	5.5	7.4	88	91	105	43	42	9.0	7.5
9	7.4	6.3	35	5.7	6.1	94	87	118	43	35	11	7.9
10	7.1	5.8	41	6.3	5.1	100	86	117	44	34	10	6.3
11	6.7	5.5	44	5.6	4.9	101	85	117	46	27	11	7.2
12	7.5	19	44	5.3	4.5	103	85	117	47	26	10	7.6
13	7.8	22	45	5.2	4.3	101	84	117	48	26	8.5	7.4
14	7.9	23	52	5.0	4.2	38	82	118	48	26	9.6	9.1
15	7.2	21	53	5.1	4.0	19	82	117	49	25	9.8	8.3
16	7.9	53	31	5.5	4.0	16	82	115	48	25	9.8	8.8
17	6.9	58	54	5.5	4.0	15	80	113	48	21	10	9.2
18	6.3	59	61	5.3	4.0	327	79	113	47	24	10	10
19	6.3	61	61	5.2	4.0	755	79	114	48	24	11	9.7
20	6.3	69	63	5.2	4.0	320	78	114	48	24	11	10
21	6.3	66	63	5.4	3.8	246	76	114	50	24	10	11
22	6.3	67	59	5.5	3.8	201	76	114	50	25	9.9	8.9
23	6.3	67	59	5.2	3.8	141	75	114	51	24	12	9.5
24	6.3	77	58	5.2	3.6	e125	78	102	51	24	12	11
25	8.2	80	41	5.2	3.4	e110	105	48	52	24	11	11
26	9.8	78	38	5.2	3.4	e100	107	48	51	24	11	12
27	9.1	78	20	5.1	47	e90	106	49	52	18	9.9	12
28	9.2	68	8.5	5.0	244	e90	106	49	52	14	9.7	12
29	9.7	69	6.5	5.0	---	e85	106	50	53	11	9.0	10
30	9.9	69	5.5	5.0	---	e85	106	50	53	11	9.4	12
31	9.4	---	5.2	5.0	---	e85	---	49	---	14	15	---
TOTAL	258.6	1180.7	1184.7	174.7	405.9	3936	2710	3020	1445	934	317.3	287.5
MEAN	8.34	39.4	38.2	5.64	14.5	127	90.3	97.4	48.2	30.1	10.2	9.58
MAX	13	80	63	10	244	755	108	118	53	56	15	13
MIN	6.3	5.5	5.2	5.0	3.4	15	75	48	43	11	8.2	6.3
AC-FT	513	2340	2350	347	805	7810	5380	5990	2870	1850	629	570

CAL YR 1990 TOTAL 5497.9 MEAN 15.1 MAX 123 MIN 2.9 AC-FT 10910
WTR YR 1991 TOTAL 15854.4 MEAN 43.4 MAX 755 MIN 3.4 AC-FT 31450

e Estimated.

SANTA CLARA RIVER BASIN

11109700 LAKE PIRU NEAR PIRU, CA

LOCATION.--Lat 34°27'41", long 118°45'02", in Temescal Grant, Ventura County, Hydrologic Unit 18070102, near center of Santa Felicia Dam on Piru Creek, 0.5 mi downstream from Santa Felicia Canyon, 4.2 mi northeast of Piru, and 20 mi downstream from Pyramid Dam.

DRAINAGE AREA.--425 mi².

PERIOD OF RECORD.--May 1955 to current year. Prior to October 1985, monthend elevation and contents only.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by United Water Conservation District). Prior to Jan. 27, 1956, reference point at intake tower at same datum. Jan. 27, 1956, to Dec. 1, 1980, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by earthfill dam. Storage began May 20, 1955. Capacity below spillway level at elevation 1,055.0 ft, 88,340 acre-ft. Water is released from outlet to Piru Creek for ground-water recharge, domestic use, and irrigation on the Oxnard Plain.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 109,400 acre-ft, Feb. 25, 1969, elevation, 1,061.45 ft; lake dry, Oct. 25 to Nov. 20, 1961.

EXTREMES (at 2400) FOR CURRENT YEAR.--Maximum contents, 44,100 acre-ft, May 22-24; maximum elevation, 1,012.49 ft, May 23, 24; minimum contents 20,500 acre-ft, Oct. 26 to Nov. 13; minimum elevation 980.34 ft, Nov. 9-11.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by United Water Conservation District in October 1985)

975	17,400	1,000	33,900	1,020	50,800
980	20,300	1,005	37,900	1,025	55,600
985	23,400	1,010	42,000	1,030	60,500
990	26,700	1,015	46,300	1,035	65,600
995	30,200				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20600	20500	22800	24600	24900	26700	38000	42700	43000	42300	43200	43100
2	20600	20500	22800	24600	24900	26800	38300	42800	42900	42300	43200	43100
3	20600	20500	22900	24700	24900	26900	38500	43000	42800	42400	43100	43100
4	20600	20500	22900	24700	24900	27000	38700	43300	42600	42500	43100	43100
5	20600	20500	22900	24700	24900	27000	38900	43500	42500	42500	43100	43100
6	20600	20500	23000	24700	24900	27100	39100	43700	42300	42500	43100	43100
7	20600	20500	23000	24700	24900	27300	39200	43700	42200	42600	43200	43100
8	20600	20500	23100	24700	24900	27500	39400	43700	42000	42600	43200	43100
9	20600	20500	23200	24700	24900	27400	39600	43700	41900	42700	43200	43100
10	20600	20500	23200	24800	24900	27000	39700	43700	41800	42700	43200	43100
11	20600	20500	23300	24800	24900	26600	39800	43700	41600	42700	43200	43000
12	20600	20500	23400	24800	24900	26100	39900	43800	41500	42700	43200	43000
13	20600	20500	23500	24800	24900	25700	40100	43800	41300	42800	43200	43000
14	20600	20600	23500	24800	24900	25800	40200	43900	41300	42800	43200	43000
15	20600	20600	23600	24800	24900	25800	40300	43900	41400	42800	43200	43100
16	20600	20700	23700	24800	24900	25800	40400	43900	41500	42900	43200	43100
17	20600	20900	23800	24800	24900	25800	40600	43900	41500	42900	43200	43100
18	20600	21000	23900	24800	24900	26900	40700	44000	41600	42900	43200	43100
19	20600	21100	24000	24800	24900	29600	40800	44000	41600	42900	43200	43100
20	20600	21300	24100	24800	24900	31500	40900	44000	41700	43000	43200	43100
21	20600	21400	24200	24800	24900	32500	41000	44000	41700	43000	43200	43100
22	20600	21600	24300	24800	24900	33300	41100	44100	41800	43000	43200	43100
23	20600	21700	24400	24800	24900	33700	41300	44100	41800	43000	43200	43100
24	20600	21900	24500	24800	24900	34100	41400	44100	41900	43100	43100	43100
25	20600	22000	24500	24800	24900	34700	41600	44000	41900	43100	43100	43100
26	20500	22000	24500	24800	24900	35600	41800	43800	42000	43100	43100	43100
27	20500	22300	24600	24800	25100	36500	42000	43700	42000	43100	43100	43100
28	20500	22400	24600	24800	25800	36900	42200	43600	42100	43200	43100	43000
29	20500	22500	24600	24800	---	37200	42400	43400	42200	43200	43100	43000
30	20500	22700	24600	24800	---	37600	42500	43300	42200	43100	43100	43000
31	20500	---	24600	24900	---	37800	---	43200	---	43200	43100	---
MAX	20600	22700	24600	24900	25800	37800	42500	44100	43000	43200	43200	43100
MIN	20500	20500	22800	24600	24900	25700	38000	42700	41300	42300	43100	43000
a	980.46	983.97	986.91	987.31	988.78	1004.93	1010.65	1011.40	1010.30	1011.38	1011.32	1011.24
b	-200	+2200	+1900	+300	+900	+12000	+4700	+700	-1000	+1000	-100	-100

CAL YR 1990 + 4100

WTR YR 1991 +22300

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11109800 PIRU CREEK BELOW SANTA FELICIA DAM, CA

LOCATION.--Lat 34°27'37", long 118°45'04", in Temescal Grant, Ventura County, Hydrologic Unit 18070102, on right bank 750 ft downstream from Santa Felicia Dam, 1 mi upstream from Lime Canyon, 4 mi northeast of Piru, and 20 mi downstream from Pyramid Dam.

DRAINAGE AREA.--425 mi².

PERIOD OF RECORD.--October 1955 to September 1968, October 1973 to current year.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 858.8 ft above National Geodetic Vertical Datum of 1929 (Levels by United Water Conservation District).

REMARKS.--No estimated daily discharges. Records good. Since May 1955 flow regulated by Lake Piru (station 11109700) and since December 1971 by Pyramid Lake (station 11109520), capacity, 171,196 acre-ft. Imported water from the California Water Project stored by Pyramid Lake. No diversion upstream from station. Spill from Lake Piru bypasses gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 623 ft³/s, Aug. 2, 1982, gage height, 3.82 ft; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 350 ft³/s, Mar. 13, gage height, 3.52 ft; minimum daily, 1.4 ft³/s, Apr. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	5.1	6.3	1.7	2.2	3.0	5.9	15	111	5.7	4.1	3.9
2	4.5	5.3	6.3	1.9	3.1	2.2	2.3	12	111	5.5	4.1	3.7
3	4.5	5.5	6.3	3.3	3.1	2.0	1.9	3.9	111	6.3	4.1	3.9
4	4.5	6.0	6.5	3.3	2.3	2.0	3.2	3.8	111	4.9	4.1	3.8
5	4.5	5.9	6.6	2.7	3.1	2.4	3.5	3.8	109	10	4.1	4.1
6	4.5	5.7	4.2	2.3	4.1	2.4	3.5	14	108	16	4.0	4.1
7	4.5	5.7	2.4	2.3	3.0	2.7	3.5	78	109	8.2	3.9	4.5
8	4.5	5.7	4.8	3.1	2.1	4.0	3.5	104	109	3.6	3.9	4.5
9	4.5	5.7	4.5	3.2	1.9	50	4.2	104	107	3.5	3.9	4.5
10	4.5	5.7	4.5	3.3	2.2	199	4.5	104	107	4.8	3.9	4.4
11	4.8	5.7	4.5	3.4	3.0	263	4.6	105	106	3.8	3.8	4.4
12	4.9	5.8	4.5	3.0	2.7	296	2.7	105	107	3.8	3.7	4.5
13	4.9	5.9	4.6	3.1	2.8	259	1.4	89	107	3.8	3.7	4.5
14	4.8	6.0	4.7	3.2	2.8	3.5	2.9	105	42	3.8	3.7	4.5
15	4.8	5.7	4.6	3.2	2.8	10	3.2	105	4.8	3.8	3.9	4.5
16	4.8	5.5	4.6	3.3	2.8	22	4.3	105	7.5	3.7	3.8	4.5
17	4.8	7.0	5.3	2.9	2.7	22	4.7	105	6.2	3.3	3.3	4.5
18	5.1	7.2	6.1	2.9	2.8	12	5.0	105	9.4	4.1	4.1	4.3
19	4.9	5.9	4.1	3.1	3.1	5.0	5.0	106	9.3	3.8	4.4	4.3
20	4.8	4.7	4.3	3.0	4.0	5.0	5.0	107	6.7	3.8	3.7	4.5
21	4.7	4.9	4.4	2.9	3.6	4.8	5.0	107	6.7	3.8	3.8	4.5
22	4.9	4.4	4.3	2.7	3.1	4.8	5.0	107	6.7	3.7	3.7	4.8
23	5.2	4.8	4.4	2.7	3.7	5.0	3.2	109	6.7	3.7	3.8	4.8
24	5.2	4.6	4.5	4.0	3.9	5.0	4.6	109	6.3	3.6	5.8	4.3
25	5.0	5.1	4.4	3.8	4.2	5.1	4.8	109	6.5	3.6	3.5	4.1
26	5.0	4.8	4.3	2.9	4.3	5.4	4.8	109	6.5	3.5	3.7	4.1
27	5.0	4.8	4.3	3.0	3.7	5.3	4.6	107	6.5	3.6	3.9	4.1
28	4.8	4.8	4.2	3.0	2.6	3.4	4.6	108	6.1	3.5	3.9	4.3
29	5.1	4.8	3.9	2.9	---	2.3	4.5	108	5.6	3.4	3.9	4.3
30	4.8	6.0	3.4	3.1	---	4.0	4.5	109	5.7	5.0	3.9	4.3
31	5.0	---	3.2	1.7	---	5.8	---	110	---	3.8	3.9	---
TOTAL	148.3	164.7	145.0	90.9	85.7	1218.1	120.4	2671.5	1562.2	147.4	122.0	129.5
MEAN	4.78	5.49	4.68	2.93	3.06	39.3	4.01	86.2	52.1	4.75	3.94	4.32
MAX	5.2	7.2	6.6	4.0	4.3	296	5.9	110	111	16	5.8	4.8
MIN	4.5	4.4	2.4	1.7	1.9	2.0	1.4	3.8	4.8	3.3	3.3	3.7
AC-FT	294	327	288	180	170	2420	239	5300	3100	292	242	257

CAL YR 1990 TOTAL 2512.5 MEAN 6.88 MAX 19 MIN 2.4 AC-FT 4980
WTR YR 1991 TOTAL 6605.7 MEAN 18.1 MAX 296 MIN 1.4 AC-FT 13100

11111500 SESPE CREEK NEAR WHEELER SPRINGS, CA

LOCATION.--Lat 34°34'40", long 119°15'25", in NW 1/4 SW 1/4 sec.30, T.6 N., R.22 W., Ventura County, Hydrologic Unit 18070102, on right bank at Sespe Gorge, 1.6 mi upstream from Tule Creek, and 5 mi northeast of Wheeler Springs.

DRAINAGE AREA.--49.5 mi².

PERIOD OF RECORD.--October 1947 to current year. Discharge estimated for period October 1947 to July 1948.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,500.65 ft above National Geodetic Vertical Datum of 1929 (levels by Ventura County Flood Control District).

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--44 years, 13.2 ft³/s, 9,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s, Mar. 1, 1983, gage height, 15.02 ft, from rating curve extended above 3,000 ft³/s on basis of slope-area measurement of peak flow; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0545	850	4.20	Mar. 18	2315	*3,820	*7.87

No flow Dec. 28, 30, 31, Jan. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.08	.09	.00	.26	285	135	13	4.3	1.9	.96	.23
2	.03	.10	.09	.03	.27	26	101	12	4.0	1.8	.80	.31
3	.03	.11	.09	.14	.27	7.0	93	11	3.8	1.7	.75	.42
4	.04	.10	.09	.11	.27	9.5	92	11	3.7	1.7	.64	.37
5	.05	.07	.09	.08	.28	18	92	9.9	3.5	e1.7	.62	.32
6	.05	.07	.08	.12	.31	4.4	85	9.8	3.4	e1.7	.61	.30
7	.05	.09	.08	.12	.31	3.0	73	9.4	3.2	e1.7	.52	.47
8	.05	.09	.08	.12	.31	2.6	59	9.1	3.0	e1.7	.50	.66
9	.04	.08	.09	.23	.31	2.3	52	9.5	2.8	e1.6	.48	.65
10	.04	.08	.08	.17	.32	2.1	48	9.6	2.6	e1.6	.48	.61
11	.04	.08	.08	.15	.34	2.0	43	9.2	2.4	e1.6	.51	.63
12	.04	.07	.08	.15	.33	1.9	39	8.8	2.4	e1.5	.49	.63
13	.04	.07	.08	.15	.31	2.1	36	8.5	2.4	e1.5	.49	.63
14	.04	.08	.07	.16	.31	1.9	34	8.3	2.4	e1.5	.64	.62
15	.04	.08	.07	.17	.31	1.8	33	7.8	2.2	e1.5	.65	.62
16	.04	.08	.07	.18	.33	1.8	31	7.6	2.2	e1.4	.66	.62
17	.05	.09	.07	.18	.38	4.0	28	7.4	2.1	e1.4	.60	.61
18	.06	.09	.07	.19	.36	1830	26	7.6	2.1	e1.4	.59	.56
19	.08	.11	.06	.18	.35	773	24	7.5	2.1	e1.3	.58	.58
20	.09	.12	.07	.18	.31	237	23	e6.7	2.0	e1.3	.55	.58
21	.08	.09	.07	.18	.28	e182	22	e6.6	2.0	e1.3	.53	.55
22	.08	.09	.06	.18	.29	e169	20	e6.5	2.0	e1.2	.44	.39
23	.08	.09	.06	.18	.31	e165	19	e6.4	2.1	e1.2	.43	.45
24	.08	.09	.05	.18	.31	e162	17	e6.3	2.2	e1.2	.46	.45
25	.08	.09	.05	.19	.31	e155	17	e6.2	2.4	e1.1	.43	.43
26	.08	.09	.04	.18	.31	e146	16	e6.1	2.2	e1.1	.41	.40
27	.10	.10	.02	.19	8.1	e143	15	e5.9	2.2	e1.0	.34	.40
28	.16	.10	.00	.21	207	e131	14	e5.8	2.9	e1.0	.32	.40
29	.13	.10	.01	.21	---	e140	14	e5.6	2.8	e.97	.29	.36
30	.12	.10	.00	.23	---	162	13	e5.4	2.2	e.94	.28	.32
31	.10	---	.00	.24	---	172	---	e4.9	---	1.0	.26	---
TOTAL	2.02	2.68	1.94	4.98	223.15	4942.4	1314	249.4	79.6	43.51	16.31	14.57
MEAN	.065	.089	.063	.16	7.97	159	43.8	8.05	2.65	1.40	.53	.49
MAX	.16	.12	.09	.24	207	1830	135	13	4.3	1.9	.96	.66
MIN	.03	.07	.00	.00	.26	1.8	13	4.9	2.0	.94	.26	.23
AC-FT	4.0	5.3	3.8	9.9	443	9800	2610	495	158	86	32	29

CAL YR 1990 TOTAL 178.77 MEAN .49 MAX 15 MIN .00 AC-FT 355
WTR YR 1991 TOTAL 6894.56 MEAN 18.9 MAX 1830 MIN .00 AC-FT 13680

e Estimated.

11113000 SESPE CREEK NEAR FILLMORE, CA

LOCATION.--Lat 34°27'03", long 118°55'30", in NE 1/4 NW 1/4 NE 1/4 sec.12, T.4 N., R.20 W., Ventura County, Hydrologic Unit 18070102, on right bank 0.1 mi downstream from Little Sespe Creek and 3.5 mi north of Fillmore.

DRAINAGE AREA.--251 mi².

PERIOD OF RECORD.--September 1911 to September 1913, October 1927 to September 1985, October 1990 to September 1991; combined records of creek and canal, October 1927 to October 1985, October 1990 to September 1991. Prior to 1935, published as "at Sespe."

GAGE.--Water-stage recorder on creek; water-stage recorder and Parshall flume on canal. Elevation of creek gage is 580 ft above National Geodetic Vertical Datum of 1929, from topographic map. Canal gage is at different datum. See WSP 1315-B for history of changes prior to Jan. 17, 1946.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation upstream from station. Fillmore Irrigation Co. has diverted water 1 mi upstream since September 1911. For records of combined discharge of Sespe Creek and Fillmore Irrigation Company's canal, see following page.

AVERAGE DISCHARGE.--Creek only: 61 years, (water years 1912-13, 1928-85, 1991), 113 ft³/s, 81,870 acre-ft/yr. Combined creek and canal: 59 years, (water years 1928-85, 1991), 119 ft³/s, 86,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 73,000 ft³/s, Feb. 10, 1978, gage height, 22.40 ft, from rating curve extended above 17,000 ft³/s on basis of slope-area measurement at gage height 22.40 ft; maximum gage height, 24.95 ft, Feb. 25, 1969, from debris wave; no flow at times in some years.

Combined creek and canal: Maximum discharge 73,000 ft³/s, Feb. 10, 1978; minimum daily, 1.1 ft³/s, July 31, Aug. 2, 1951.

EXTREMES FOR CURRENT YEAR.--Creek only: Peak discharges greater than base discharge of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0400	5,000	11.00	Mar. 26	1845	2,580	9.05
Mar. 19	0015	*16,300	*14.48				

Minimum daily, 0.08 ft³/s, Sept. 27.

Combined creek and canal: Maximum discharge, 16,300 ft³/s, Mar. 19; minimum daily, 2.7 ft³/s, Jan. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	.25	.18	.51	.55	2890	596	83	28	7.6	.40	.20
2	.21	.25	.18	.51	.59	586	484	81	28	6.4	.44	.20
3	.21	.25	.18	4.2	.59	216	383	76	27	6.3	.31	.21
4	.21	.25	.18	13	.54	127	374	72	26	5.7	.39	.22
5	.21	.25	.18	8.6	.51	135	377	68	25	5.1	.76	.25
6	.21	.25	.21	4.3	.51	112	391	65	24	4.4	1.1	.28
7	.21	.21	.21	3.7	.48	77	355	64	23	4.1	.34	.32
8	.21	.21	.21	3.2	.46	65	293	63	21	4.1	.39	.87
9	.18	.21	.21	3.4	.47	57	261	60	22	4.3	1.1	.46
10	.18	.21	.21	3.7	.59	54	246	57	20	4.6	1.5	1.1
11	.18	.21	.28	3.3	.59	48	215	54	18	5.4	1.9	.25
12	.21	.21	.33	2.8	.65	42	207	50	16	5.7	.42	.19
13	.21	.21	.38	2.8	.74	42	e198	48	14	5.5	.78	.18
14	.21	.21	.42	2.8	.79	38	e191	46	14	5.1	.41	.18
15	.25	.25	.38	2.8	.84	34	e182	44	12	4.8	.91	.18
16	.25	.25	.40	2.7	.84	29	e175	42	10	4.0	1.1	.17
17	.25	.25	.36	1.7	.61	28	e169	40	9.0	3.3	.31	.15
18	.25	.25	.38	.59	.77	6430	e163	39	8.4	3.3	.31	.15
19	.25	.28	.34	.59	.97	6540	e157	39	8.2	3.2	.25	.13
20	.25	.33	.33	.60	.87	2070	e151	39	7.5	3.3	.64	.13
21	.21	.33	.33	.77	.56	1270	e145	39	6.5	3.3	.21	.15
22	.21	.28	.33	.89	.53	853	e139	38	6.7	e3.2	.18	.13
23	.21	.25	.32	1.2	.56	445	e134	36	6.5	e2.8	.16	.36
24	.21	.25	.38	1.3	.59	370	129	34	6.4	e2.0	.17	.73
25	.21	.21	.38	1.5	.59	773	124	32	6.5	e1.0	.22	.12
26	.21	.21	.38	1.5	.59	1070	113	32	6.4	.56	.63	.09
27	.21	.21	.44	1.3	210	1200	106	32	5.9	.51	1.4	.08
28	.21	.18	.44	.76	1990	773	98	31	6.4	.52	.24	.10
29	.21	.18	.44	1.0	---	617	91	30	7.4	.90	.19	.13
30	.21	.18	.45	.96	---	627	85	30	7.7	1.3	.19	.17
31	.21	---	.51	.55	---	648	---	27	---	.41	.23	---
TOTAL	6.66	7.07	9.95	77.53	2216.38	28266	6732	1491	427.5	112.70	17.58	7.88
MEAN	.21	.24	.32	2.50	79.2	912	224	48.1	14.2	3.64	.57	.26
MAX	.25	.33	.51	13	1990	6540	596	83	28	7.6	1.9	1.1
MIN	.18	.18	.18	.51	.46	28	85	27	5.9	.41	.16	.08
AC-FT	13	14	20	154	4400	56070	13350	2960	848	224	35	16

WTR YR 1991 TOTAL 39372.25 MEAN 108 MAX 6540 MIN .08 AC-FT 78090

e Estimated.

SANTA CLARA RIVER BASIN

11113001 SESPE CREEK NEAR FILLMORE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SESPE CREEK AND FILLMORE
IRRIGATION COMPANY CANAL NEAR FILLMORE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	5.2	3.2	3.2	3.7	2890	596	90	33	14	6.6	4.2
2	5.2	5.2	3.2	3.2	3.8	586	484	88	33	16	6.4	4.1
3	5.2	5.2	3.2	5.8	3.8	216	383	83	32	16	6.2	4.0
4	5.2	5.2	3.2	14	3.7	127	374	78	31	15	6.1	4.0
5	5.2	5.2	3.0	9.3	3.7	135	377	74	29	14	6.0	4.1
6	5.2	5.2	3.0	4.7	3.7	112	391	72	29	13	6.2	4.2
7	5.2	5.2	3.0	3.9	3.6	77	355	71	28	12	5.9	4.0
8	5.2	5.2	3.0	3.3	3.6	65	293	70	27	12	5.6	4.5
9	5.2	5.2	3.0	3.6	3.5	57	261	66	27	12	5.4	4.2
10	5.2	5.2	3.0	3.9	3.6	54	246	63	25	12	5.4	4.7
11	5.2	5.2	3.1	3.4	3.5	48	215	62	24	12	5.5	4.4
12	5.2	4.2	3.1	2.9	3.4	42	207	59	22	13	5.2	4.5
13	5.2	3.2	3.2	2.9	3.5	42	e198	56	20	12	5.6	4.5
14	5.2	3.2	3.2	2.9	3.5	38	e191	54	20	11	5.6	4.5
15	5.2	3.2	3.1	2.9	3.4	34	e182	52	18	11	5.8	4.5
16	5.2	3.2	3.2	2.7	3.6	29	e175	50	16	10	6.1	4.3
17	5.2	3.2	3.2	3.6	3.6	28	e169	48	15	9.5	5.6	4.0
18	5.2	3.2	3.2	3.6	3.4	6430	e163	46	14	9.3	5.5	3.9
19	5.2	3.3	3.1	3.7	3.3	6540	e157	46	14	9.5	5.1	3.8
20	5.2	3.3	3.1	3.6	3.5	2070	e151	46	14	9.8	5.1	3.7
21	5.2	3.3	3.0	3.7	3.6	1270	e145	46	14	9.6	4.8	3.7
22	5.2	3.3	3.0	3.5	3.5	853	e139	45	14	e9.2	4.6	3.7
23	5.2	3.2	3.1	3.6	3.6	445	e134	43	14	e9.2	4.4	3.6
24	5.2	3.2	3.1	3.5	3.7	370	129	40	14	e8.7	4.4	3.8
25	5.2	3.2	3.1	3.6	3.6	773	124	38	14	e8.6	4.3	3.6
26	5.2	3.2	3.2	3.5	3.6	1070	113	37	14	8.5	4.2	3.6
27	5.2	3.2	3.2	3.8	212	1200	106	37	14	8.0	4.9	3.5
28	5.2	3.2	3.2	3.8	1990	773	99	37	14	7.5	4.2	3.4
29	5.2	3.2	3.2	3.6	---	617	93	35	15	7.0	4.2	3.4
30	5.2	3.2	3.2	4.0	---	627	90	35	14	7.2	4.1	3.6
31	5.2	---	3.3	3.7	---	648	---	33	---	6.8	4.2	---
TOTAL	161.2	119.4	96.9	127.4	2295.0	28266	6740	1700	612	333.4	163.2	120.0
MEAN	5.20	3.98	3.13	4.11	82.0	912	225	54.8	20.4	10.8	5.26	4.00
MAX	5.2	5.2	3.3	14	1990	6540	596	90	33	16	6.6	4.7
MIN	5.2	3.2	3.0	2.7	3.3	28	90	33	14	6.8	4.1	3.4
AC-FT	320	237	192	253	4550	56070	13370	3370	1210	661	324	238

WTR YR 1991 TOTAL 40734.5 MEAN 112 MAX 6540 MIN 2.7 AC-FT 80800

e Estimated.

11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CA

LOCATION.--Lat 34°24'48", long 119°04'53", in NW 1/4 SE 1/4 sec.21, T.4 N., R.21 W., Mission San Buenaventura Grant, Ventura County, Hydrologic Unit 18070102, on right bank 1.3 mi downstream from Sisar Creek and 4.8 mi north of Santa Paula
 DRAINAGE AREA.--38.4 mi².

PERIOD OF RECORD.--October 1927 to current year. March 1912 to September 1913, at site 1.2 mi upstream; records not equivalent.

REVISED RECORDS.--WSP 1635: 1933(M), 1934, 1936(M), 1941(M). WSP 1715: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 790 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 22, 1980, at various sites and datums 1.3 mi downstream. See WDR CA-79-1 for history of changes prior to Oct. 22, 1980.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow affected by pumping and return flow from irrigated areas.

AVERAGE DISCHARGE.--64 years, 22.6 ft³/s, 16,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft³/s, Feb. 25, 1969, gage height, 15.18 ft, from floodmark, site and datum then in use, from rating curve extended above 2,300 ft³/s on basis of critical-depth measurement at gage height 12.2 ft; no flow at times in 1949, 1951-52, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 28	1400	799	4.82	Mar. 26	unknown	unknown	unknown
Mar. 18	2330	*1,010	*5.07				

Minimum daily, 0.43 ft³/s, Nov. 10-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.55	.69	1.6	1.3	404	e240	21	10	5.8	e3.3	e2.6
2	.83	.52	.69	1.6	1.0	75	e180	21	9.4	5.7	e3.2	e2.6
3	.84	.51	.69	1.6	1.2	30	e130	20	8.9	8.2	e3.2	e2.5
4	.72	.49	.69	2.7	1.0	24	110	19	8.7	6.2	e3.2	e2.5
5	.71	.51	.69	1.9	1.1	22	110	18	8.7	6.7	e3.2	2.4
6	.77	.49	.67	1.4	1.3	16	108	18	8.7	6.1	e3.2	2.4
7	.84	.48	.63	1.6	1.4	14	101	18	8.4	5.4	e3.1	e2.4
8	.76	.50	.65	1.4	1.4	12	88	16	8.3	5.0	e3.1	e2.4
9	.62	.47	.69	1.8	1.3	10	77	16	8.1	5.1	e3.1	e2.3
10	.67	.43	.73	1.6	1.4	9.5	81	15	7.8	5.2	e3.1	2.3
11	.71	.43	.76	1.1	1.4	8.9	77	15	7.9	6.0	e3.1	2.2
12	.74	.43	.78	1.3	1.0	8.0	77	14	8.0	5.8	e3.1	2.1
13	.82	.44	.82	1.4	1.3	8.5	69	14	8.0	5.3	e3.0	2.0
14	.82	.50	.87	1.3	1.5	8.2	66	14	7.9	5.1	e3.0	2.1
15	.86	.53	.90	1.2	1.5	8.2	60	13	7.8	5.9	e3.0	2.2
16	.90	.54	.96	1.2	1.7	8.0	43	13	7.5	5.2	e3.0	1.9
17	.86	.55	1.0	1.1	1.7	8.8	39	12	7.2	5.8	e3.0	1.8
18	.84	.59	.99	1.2	1.6	451	37	12	7.1	5.3	e2.9	1.7
19	.84	.63	.98	1.2	1.6	434	35	12	7.0	5.0	e2.9	1.7
20	.79	.86	1.0	1.3	1.4	329	34	12	7.1	5.1	e2.9	1.6
21	.65	.75	1.1	1.5	1.2	170	32	12	7.1	5.0	2.9	1.6
22	.65	.69	1.2	1.4	1.4	143	31	12	7.1	4.4	e2.8	1.7
23	.64	.63	1.3	1.1	1.4	96	29	11	6.9	4.5	e2.8	1.7
24	.58	.60	1.2	1.4	1.2	93	29	11	7.0	4.9	e2.8	1.5
25	.54	.61	1.2	1.5	1.3	e240	27	11	6.8	5.1	e2.8	1.5
26	.52	.66	1.3	1.6	1.3	e340	26	11	6.5	3.6	e2.8	1.7
27	.51	.66	1.3	1.6	5.4	e325	24	11	6.5	3.8	e2.7	1.9
28	.52	.69	1.3	1.5	269	e215	22	11	7.0	3.8	e2.7	1.8
29	.52	.69	1.3	1.7	---	185	22	11	6.8	3.5	e2.7	1.2
30	.54	.69	1.4	1.5	---	e270	21	11	6.1	2.9	e2.7	1.5
31	.53	---	1.5	1.3	---	e280	---	11	---	3.3	e2.6	---
TOTAL	21.84	17.12	29.98	45.6	309.3	4246.1	2025	436	230.3	158.7	91.9	59.8
MEAN	.70	.57	.97	1.47	11.0	137	67.5	14.1	7.68	5.12	2.96	1.99
MAX	.90	.86	1.5	2.7	269	451	240	21	10	8.2	3.3	2.6
MIN	.51	.43	.63	1.1	1.0	8.0	21	11	6.1	2.9	2.6	1.2
AC-FT	43	34	59	90	613	8420	4020	865	457	315	182	119

CAL YR 1990 TOTAL 1218.41 MEAN 3.34 MAX 120 MIN .29 AC-FT 2420
 WTR YR 1991 TOTAL 7671.64 MEAN 21.0 MAX 451 MIN .43 AC-FT 15220

e Estimated.

11114000 SANTA CLARA RIVER AT MONTALVO, CA

LOCATION.--Lat 34°14'31", long 119°11'21", in San Miguel Grant, Ventura County, Hydrologic Unit 18070102, on downstream end of center pier of southbound bridge on U.S. Highway 101, 0.9 mi southeast of Montalvo, and 4.5 mi upstream from mouth.
DRAINAGE AREA.--1,612 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to September 1932, October 1949 to September 1988, October 1989 to current year. Monthly discharge only for 1950-67, published in WDR 1968. October 1949 to September 1969, published as "at Saticoy."

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Two water-stage recorders. Datum of main gage is 51.88 ft above National Geodetic Vertical Datum of 1929 (levels by Ventura County Flood Control District). Oct. 1, 1927, to Sept. 30, 1932, and Oct. 1, 1949, to Sept. 30, 1967, at same site at different datums. Oct. 1, 1967, to Feb. 2, 1970, at site 3.9 mi upstream at different datum. Supplementary gage 0.7 mi upstream at different datum.

REMARKS.--Records poor. Flow partly regulated by Lake Piru (station 11109700), capacity, 88,340 acre-ft, 33 mi upstream since May 1955; by Pyramid Lake (station 11109520), capacity, 171,196 acre-ft, 42 mi upstream since December 1971; by Castaic Lake (station 11108133), capacity 324,000 acre-ft, 43 mi upstream since January 1972. Natural flow affected by ground-water withdrawals, diversions, municipal use, and ground-water replenishment. Imported water from the California Water Project released to the basin at Castaic Dam and Pyramid Dam. Diversion to spreading grounds and for irrigation in Pleasant Valley, at site 6.0 mi upstream. AVERAGE DISCHARGE represents flow to the ocean regardless of upstream development.

AVERAGE DISCHARGE.--46 years (water years 1928-32, 1950-88, 1990-91), 146 ft³/s, 105,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 165,000 ft³/s, Jan. 25, 1969, gage height, 17.41 ft, present datum; no flow for long periods in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 120,000 ft³/s, estimated by Ventura County Flood Control District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,000 ft³/s, Mar. 19, gage height, 6.47 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	6720	378	e.00	e.00	e.00	.00	e.00
2	.00	.00	.00	.00	.00	680	257	e.00	e.00	e.00	e.00	e.00
3	.00	.00	.00	.00	.00	43	181	e.00	e.00	e.00	e.00	e.00
4	.00	.00	.00	.00	.00	20	e123	e.00	e.00	e.00	e.00	e.00
5	.00	.00	.00	.00	.00	1.9	90	e.00	e.00	e.00	e.00	e.00
6	.00	.00	.00	.00	.00	1.0	e45	e.00	e.00	e.00	e.00	.00
7	.00	.00	.00	.00	.00	.90	e20	e.00	e.00	e.00	e.00	.00
8	.00	.00	.00	.00	.00	.50	e1.0	e.00	e.00	e.00	e.00	.00
9	.00	.00	.00	.00	.00	.10	e.50	.00	e.00	e.00	e.00	.00
10	.00	.00	.00	.00	.00	.06	e.10	e.00	e.00	.00	e.00	.00
11	.00	.00	.00	.00	.00	.06	e.05	e.00	e.00	e.00	e.00	.00
12	.00	.00	.00	.00	.00	.04	e.04	e.00	.00	e.00	e.00	.00
13	.00	.00	.00	.00	.00	.03	e.03	e.00	e.00	e.00	e.00	.00
14	.00	.00	.00	.00	.00	e.02	e.02	e.00	e.00	e.00	e.00	.00
15	.00	.00	.00	.00	.00	e.02	e.01	e.00	e.00	e.00	e.00	.00
16	.00	.00	.00	.00	.00	e.02	e.00	e.00	e.00	e.00	e.00	.00
17	.00	.00	.00	.00	.00	e.02	e.00	e.00	e.00	e.00	e.00	.00
18	.00	.00	.00	.00	.00	3260	e.00	e.00	e.00	e.00	e.00	.00
19	.00	.00	.00	.00	.00	13000	e.00	e.00	e.00	e.00	e.00	.00
20	.00	.00	.00	.00	.00	3890	e.00	e.00	e.00	e.00	e.00	.00
21	.00	.00	.00	.00	.00	1290	e.00	e.00	e.00	e.00	e.00	.00
22	.00	.00	.00	.00	.00	638	e.00	e.00	e.00	e.00	e.00	.00
23	.00	.00	.00	.00	.00	594	e.00	e.00	e.00	e.00	e.00	.00
24	.00	.00	.00	.00	.00	578	e.00	e.00	e.00	e.00	e.00	.00
25	.00	.00	.00	.00	.00	918	e.00	e.00	e.00	e.00	e.00	.00
26	.00	.00	.00	.00	.00	1720	e.00	e.00	e.00	e.00	e.00	e.00
27	.00	.00	.00	.00	.76	2980	e.00	e.00	e.00	e.00	e.00	e.00
28	.00	.00	.00	.00	740	687	e.00	e.00	e.00	e.00	e.00	e.00
29	.00	.00	.00	.00	---	465	e.00	e.00	e.00	e.00	e.00	e.00
30	.00	.00	.00	.00	---	391	e.00	e.00	e.00	e.00	e.00	e.00
31	.00	---	.00	.00	---	404	---	e.00	---	e.00	e.00	---
TOTAL	0.00	0.00	0.00	0.00	740.76	38282.67	1095.75	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	26.5	1235	36.5	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	740	13000	378	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	1470	75930	2170	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 800.00 MEAN 2.19 MAX 700 MIN .00 AC-FT 1590
WTR YR 1991 TOTAL 40119.18 MEAN 110 MAX 13000 MIN .00 AC-FT 79580

e Estimated.

11114000 SANTA CLARA RIVER AT MONTALVO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-85, 1989, October 1990 to September 1991.

WATER TEMPERATURE: Water years 1968, 1969, 1971-81, 1982-85.

SEDIMENT DATA: Water years 1968-85, October 1988 to September 1989, October 1990 to September 1991.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1967 to September 1969, October 1970 to September 1981, October 1982 to September 1985.

SEDIMENT DATA: October 1967 to September 1981, October 1982 to September 1985.

REMARKS.--Prior to October 1969, published as "at Saticoy" (station 11113920).

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INSTI. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR						
02...	1500	431	18.0	967	1130	92
03...	1130	33	17.0	166	15	99
04...	1700	1.7	17.5	21	0.10	79
05...	1310	1.5	18.0	20	0.08	92
20...	1650	4790	11.0	10800	140000	91
28...	1645	562	15.5	482	731	83
APR						
05...	1045	91	19.0	36	8.8	85

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
MAR				
02...	--	--	--	--
03...	--	--	--	--
04...	--	--	--	--
05...	--	--	--	--
20...	94	97	99	100
28...	85	90	99	100
APR				
05...	--	--	--	--

VENTURA RIVER BASIN

11118500 VENTURA RIVER NEAR VENTURA, CA

LOCATION.--Lat 34°21'05", long 119°18'23", in southeast corner of Santa Ana Grant, Ventura County, Hydrologic Unit 18070101, on right bank 420 ft downstream from bridge on Casitas Pass Road at Foster Memorial Park, 0.2 mi downstream from Coyote Creek, and 5 mi north of Ventura.
DRAINAGE AREA.--188 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1911 to January 1914, October 1929 to current year; combined records of river and diversion, October 1932 to current year.

REVISED RECORDS.--WSP 1565: 1957. WSP 1928: Drainage area.

GAGE.--Water-stage recorder on river; water-stage recorder and Parshall flume on diversion. Datum of gage is 205.23 ft, Ventura County Flood Control datum. See WSP 1315-B for history of changes prior to Nov. 2, 1949, Nov. 2, 1949, to June 12, 1969, at site 80 ft downstream at datum 9.00 ft lower. June 13, 1969, to Dec. 22, 1986, at site 370 ft upstream at datum 5.00 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow partly regulated since March 1948 by Matilija Reservoir, usable capacity, 1,480 acre-ft, and since October 1959 by Casitas Reservoir, capacity, 267,000 acre-ft. Water diverted to Casitas Reservoir on Coyote Creek since January 1959. Diversion by city of Ventura for municipal supply began prior to 1911. AVERAGE DISCHARGE (river only) represents flow to ocean regardless of upstream development. For records of combined discharge of river and Ventura City diversion, see following page.

AVERAGE DISCHARGE.--River only: 64 years (water years 1912-13, 1930-91), 57.0 ft³/s, 41,300 acre-ft/yr.
Combined river and diversion: 59 years, 66.2 ft³/s, 47,960 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 63,600 ft³/s, Feb. 10, 1978, gage height, 24.14 ft, from rating curve extended above 34,000 ft³/s; maximum gage height, 29.3 ft, Jan. 25, 1969, present datum, from floodmarks; no flow at times in many years.
Combined river and diversion: Maximum discharge, 63,600 ft³/s, Feb. 10, 1978; no flow Nov. 28, 29, 1977; Oct. 23-26, 1989; July 9-11, 1990.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 11,300 ft³/s, Mar. 19, gage height, 14.67 ft; no flow for many days.
Combined river and diversion: Maximum discharge, 11,300 ft³/s, Mar. 19; minimum daily, 0.02 ft³/s, Nov. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	524	28	5.4	18	8.4	.81	.00
2	.00	.00	.00	.00	.00	26	25	6.6	21	5.5	1.0	.00
3	.00	.00	.00	.00	.00	2.0	20	6.1	18	4.1	4.0	.00
4	.00	.00	.00	.00	.00	.10	19	4.3	14	1.6	9.5	.00
5	.00	.00	.00	.00	.00	2.3	13	9.1	11	.88	7.1	.00
6	.00	.00	.00	.00	.00	.00	7.8	8.7	10	1.6	3.3	.00
7	.00	.00	.00	.00	.00	.02	11	5.7	7.3	7.2	2.3	.00
8	.00	.00	.00	.00	.00	.07	11	5.5	9.1	6.2	2.2	.00
9	.00	.00	.00	.00	.00	.08	8.0	5.5	16	.42	1.7	.00
10	.00	.00	.00	.00	.00	.04	9.0	5.7	13	.32	2.9	.00
11	.00	.00	.00	.00	.00	.00	8.8	6.3	6.4	1.6	3.8	.00
12	.00	.00	.00	.00	.00	.00	6.2	8.1	4.9	1.5	3.1	.00
13	.00	.00	.00	.00	.00	.02	11	11	4.1	3.7	1.7	.00
14	.00	.00	.00	.00	.00	.00	15	10	3.7	14	1.5	.00
15	.00	.00	.00	.00	.00	.00	6.0	6.5	3.8	7.6	1.1	.00
16	.00	.00	.00	.00	.00	.00	4.9	7.8	6.9	4.2	.65	.00
17	.00	.00	.00	.00	.00	.19	6.0	9.2	5.7	1.7	1.4	.00
18	.00	.00	.00	.00	.00	2370	9.9	11	6.0	3.4	5.4	.00
19	.00	.00	.00	.00	.00	2990	7.0	16	4.2	4.1	2.1	.00
20	.00	.00	.00	.00	.00	e1100	9.8	17	7.0	3.6	.57	.00
21	.00	.00	.00	.00	.00	e300	13	16	7.8	5.8	.42	.00
22	.00	.00	.00	.00	.00	e180	9.0	12	5.1	5.1	.20	.00
23	.00	.00	.00	.00	.00	e170	4.7	12	4.5	4.2	.14	.00
24	.00	.00	.00	.00	.00	e160	4.0	15	6.8	2.5	.00	.00
25	.00	.00	.00	.00	.00	e160	4.8	18	7.5	1.6	.33	.00
26	.00	.00	.00	.00	.00	e140	4.5	20	7.1	2.0	.60	.00
27	.00	.00	.00	.00	.00	e120	8.3	21	6.0	1.5	.05	.00
28	.00	.00	.00	.00	.68	e110	11	20	6.1	3.5	.00	.00
29	.00	.00	.00	.00	---	58	6.9	14	6.5	7.5	.00	.00
30	.00	.00	.00	.00	---	39	5.4	15	7.5	1.0	.00	.00
31	.00	---	.00	.00	---	34	---	16	---	.72	.00	---
TOTAL	0.00	0.00	0.00	0.00	68.00	8485.82	308.0	344.5	255.0	117.04	57.87	0.00
MEAN	.000	.000	.000	.000	2.43	274	10.3	11.1	8.50	3.78	1.87	.000
MAX	.00	.00	.00	.00	68	2990	28	21	21	14	9.5	.00
MIN	.00	.00	.00	.00	.00	.00	4.0	4.3	3.7	.32	.00	.00
AC-FT	.00	.00	.00	.00	135	16830	611	683	506	232	115	.00

CAL YR 1990 TOTAL 183.09 MEAN .50 MAX 142 MIN .00 AC-FT 363
WTR YR 1991 TOTAL 9636.23 MEAN 26.4 MAX 2990 MIN .00 AC-FT 19110

e Estimated.

11118501 VENTURA RIVER NEAR VENTURA, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF VENTURA RIVER AND VENTURA CITY DIVERSION NEAR VENTURA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.5	2.3	1.9	1.8	529	37	15	25	16	12	7.9
2	2.9	2.5	2.2	1.9	1.8	31	35	15	29	16	12	14
3	2.9	2.5	1.9	1.9	1.7	7.8	31	17	28	16	12	14
4	2.9	2.5	1.6	1.9	1.7	6.6	29	15	25	15	15	11
5	2.7	.93	1.6	1.9	1.8	9.6	23	15	23	14	16	12
6	2.8	.08	1.6	1.9	1.8	6.9	19	18	21	8.9	16	14
7	2.8	.02	1.8	1.9	1.8	6.2	19	19	19	13	14	12
8	2.8	1.3	1.9	1.9	1.8	5.4	20	16	16	18	15	16
9	2.6	2.7	1.9	2.0	1.8	6.3	20	14	22	13	13	14
10	2.7	2.9	1.6	1.9	1.7	6.0	21	17	24	12	9.3	14
11	2.7	2.9	1.8	1.9	1.8	5.9	20	14	18	14	11	13
12	2.5	2.7	1.8	1.9	1.8	5.6	22	14	17	13	13	13
13	2.8	2.5	1.6	1.9	1.8	5.6	19	17	16	10	14	9.1
14	2.3	.89	1.9	1.9	1.7	5.6	25	19	16	19	12	9.3
15	2.6	.39	1.9	1.9	1.6	5.6	27	21	12	18	13	12
16	2.7	1.4	1.9	1.9	1.6	5.5	22	19	15	17	13	14
17	2.6	3.1	1.9	1.9	1.6	5.7	16	20	14	13	10	13
18	2.6	2.8	1.9	1.9	1.6	2380	18	18	16	13	13	13
19	2.6	2.8	1.9	1.9	1.6	3000	18	23	18	14	17	12
20	2.6	2.5	1.9	1.9	1.6	1110	17	27	15	13	9.6	12
21	2.6	2.5	1.9	1.9	1.6	310	18	27	18	13	12	8.7
22	2.6	2.5	2.0	1.9	1.6	190	18	24	19	17	11	12
23	2.6	2.5	2.0	1.8	1.6	176	19	24	15	15	14	12
24	2.6	2.5	1.9	1.9	1.6	166	16	26	17	15	10	12
25	2.6	2.4	2.0	1.8	1.6	167	17	25	16	13	9.3	12
26	2.5	2.4	2.0	1.9	1.6	150	16	27	17	10	15	12
27	2.5	2.4	1.9	1.7	1.6	130	15	28	16	12	15	12
28	2.5	2.4	1.9	1.7	70	119	17	31	16	10	13	11
29	2.5	2.4	1.9	1.9	---	67	20	27	16	16	14	11
30	2.5	2.2	1.5	1.8	---	44	15	26	15	14	14	11
31	2.5	---	1.9	1.8	---	40	---	27	---	13	11	---
TOTAL	82.2	64.11	57.8	58.2	115.6	8703.3	629	645	554	433.9	398.2	363.0
MEAN	2.65	2.14	1.86	1.88	4.13	281	21.0	20.8	18.5	14.0	12.8	12.1
MAX	3.1	3.1	2.3	2.0	70	3000	37	31	29	19	17	16
MIN	2.3	.02	1.5	1.7	1.6	5.4	15	14	12	8.9	9.3	7.9
AC-FT	163	127	115	115	229	17260	1250	1280	1100	861	790	720

CAL YR 1990 TOTAL 1786.65 MEAN 4.89 MAX 148 MIN .00 AC-FT 3540
WTR YR 1991 TOTAL 12104.31 MEAN 33.2 MAX 3000 MIN .02 AC-FT 24010

VENTURA RIVER BASIN

11118500 VENTURA RIVER NEAR VENTURA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1907 to December 1908, water years 1967 to current year.

CHEMICAL DATA: December 1907 to December 1908, water years 1967-79.

WATER TEMPERATURE: Water years 1969, 1971-73, 1975-81, 1986.

SEDIMENT DATA: Water years 1969-73, 1975 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1968 to September 1969, October 1970 to September 1973, October 1974 to September 1981, October 1985 to September 1986.

SUSPENDED-SEDIMENT DISCHARGE: October 1968 to September 1973, October 1974 to September 1981, October 1985 to September 1986.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INSTI. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR						
01...	1715	232	15.0	521	346	99
05...	1025	0.85	15.0	17	0.04	76
18...	1730	3430	--	¹ 3040	28200	82
28...	1210	97	14.5	70	18	92
JUN						
12...	1015	4.4	18.5	38	0.45	--

¹From single vertical sample.

11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA

LOCATION.--Lat 34°24'05", long 119°29'08", in El Rincon Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank 100 ft upstream from bridge on State Highway 192, 165 ft downstream from Gobernador Creek, and 1.8 mi northeast of Carpinteria.
 DRAINAGE AREA.--13.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1941 to September 1977, October 1978 to current year.
 REVISED RECORDS.--WSP 1061: 1943. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 130 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 1, 1958, at site 100 ft downstream, at datum 6.00 ft higher. July 2, 1958, to Aug. 27, 1970, at site 65 ft downstream at datum 4.00 ft higher. Aug. 28, 1970, to Sept. 30, 1977, at site 100 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation upstream from station. Gobernador Land and Water Co. diverts from Gobernador Creek 1.8 mi upstream from station. Small lake 0.8 mi southeast of station and outside the drainage area stores storm runoff and surplus water diverted from Gobernador Creek by Gobernador Land and Water Co. At times this lake is drained by pumping water back into Gobernador Creek 1,000 ft upstream from station.

AVERAGE DISCHARGE.--49 years (water years 1942-77, 1979-91), 2.86 ft³/s, 2,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft³/s, Dec. 27, 1971, gage height, 14.10 ft, from floodmark, from rating curve extended above 130 ft³/s on basis of slope-area measurement of peak flow; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 125 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0700	142	4.47	Mar. 26	1830	150	4.50
Mar. 18	2345	*846	*6.04				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	52	7.3	.12	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	4.4	5.9	.12	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.89	4.8	.13	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.64	3.4	.11	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.51	2.5	.08	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	2.2	.04	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	1.9	.01	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	1.8	.01	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	1.6	.02	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	1.3	.02	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	1.2	.02	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	1.1	.03	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	1.0	.01	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.93	.01	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	1.2	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.57	1.0	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	212	.93	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	192	.67	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	68	.69	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	27	.67	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	15	.78	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	10	.57	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	8.7	.58	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	23	.49	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	48	.35	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	57	.24	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	22	.18	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	20	.16	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	14	.13	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	9.1	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	22.00	792.81	47.17	0.73	0.00	0.00	0.00	0.00
MEAN	.0000	.0000	.0000	.0000	.79	25.6	1.57	.024	.0000	.0000	.0000	.0000
MAX	.00	.00	.00	.00	22	212	7.3	.13	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	44	1570	94	1.4	.00	.00	.00	.00

CAL YR 1990 TOTAL 6.88 MEAN .019 MAX 6.3 MIN .00 AC-FT 14
 WTR YR 1991 TOTAL 862.71 MEAN 2.36 MAX 212 MIN .00 AC-FT 1710

MISSION CREEK BASIN

261

11119750 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA, CA

LOCATION.--Lat 34°25'35", long 119°43'20", in Pueblo Lands of Santa Barbara, Santa Barbara County, Hydrologic Unit 18060013, on left bank 200 ft downstream from Los Olivos Street in Santa Barbara.

DRAINAGE AREA.--8.38 mi².

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and low-flow concrete control. Concrete-lined channel. Elevation of gage is 105 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. At times water is released to creek for ground-water recharge from Gibraltar tunnel several miles upstream. Control installed Nov. 26, 1979.

AVERAGE DISCHARGE.--21 years, 2.54 ft³/s, 1,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,580 ft³/s, Jan. 18, 1973, gage height, 4.97 ft, from rating curve extended above 41 ft³/s on basis of computation of flow in concrete-lined channel; maximum gage height, 5.45 ft, Feb. 16, 1980; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 19	0015	*468	*3.37				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	.00	.00	.00	41	2.1	.00	.00	.00	.00	.00
2	e.00	.00	.00	.00	.00	1.6	1.1	.00	.00	.00	.00	.00
3	e.00	.00	.00	.06	.00	.00	.43	.00	.00	.00	.00	.00
4	e.00	.00	.00	2.9	.00	3.6	.13	.00	.00	.00	.00	.00
5	e.00	.00	.00	.00	.00	.45	.02	.00	.00	.00	.00	.00
6	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	e.00	.00	.00	.94	.00	.00	.00	.00	.00	.00	.00	.00
10	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	18	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	140	.01	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	84	.03	.00	.28	.00	.00	.10
20	.00	.00	.00	.00	.00	52	.00	.00	.25	.00	.00	.00
21	.00	.00	.00	.00	.00	11	.00	.00	.24	.00	.00	.00
22	.00	.00	.00	.00	.00	4.8	.00	.00	.21	.00	.00	.00
23	.00	.00	.00	.00	.00	2.9	.00	.00	.11	.00	.00	.00
24	.00	.00	.00	.00	.00	4.9	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	24	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	37	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	9.8	35	.00	.00	.04	.00	.00	.00
28	.00	.00	.00	.00	10	11	.00	.00	2.2	.00	.00	.00
29	.00	.00	.00	.00	---	6.2	.00	.00	.03	.00	.00	.00
30	.00	.00	.00	.00	---	3.7	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	2.8	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	3.90	19.80	483.99	3.82	0.00	3.36	0.00	0.04	0.10
MEAN	.000	.000	.000	.13	.71	15.6	.13	.000	.11	.000	.001	.003
MAX	.00	.00	.00	2.9	10	140	2.1	.00	2.2	.00	.04	.10
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	7.7	39	960	7.6	.00	6.7	.00	.08	.2

CAL YR 1990 TOTAL 41.80 MEAN .11 MAX 11 MIN .00 AC-FT 83
WTR YR 1991 TOTAL 515.01 MEAN 1.41 MAX 140 MIN .00 AC-FT 1020

e Estimated.

ARROYO BURRO BASIN

11119780 ARROYO BURRO AT SANTA BARBARA, CA

LOCATION.--Lat 34°26'13", long 119°44'44", in Pueblo Lands of Santa Barbara, Santa Barbara County, Hydrologic Unit 18060013, on right bank 0.2 mi south of State Street on Hope Avenue in Santa Barbara.

DRAINAGE AREA.--6.65 mi².

PERIOD OF RECORD.--October 1970 to current year. Prior to October 1988, published as Arroyo Burro Creek.

REVISED RECORDS.--WDR CA-76-1: 1974(M), 1975(P).

GAGE.--Water-stage recorder. Concrete-lined channel with a low-water control. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Small amount of inflow occurs at times from large shopping center that empties water directly into the stream. Partial regulation by Lauro Canyon Reservoir on San Roque Creek.

AVERAGE DISCHARGE.--21 years, 2.06 ft³/s, 1,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,850 ft³/s, Mar. 4, 1978, Feb. 16, 1980, from rating curve extended above 50 ft³/s on basis of slope-conveyance study; maximum gage height, 5.67 ft, Mar. 4, 1978; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 28	0815	409	3.45	Mar. 18	2400	*710	*4.17

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.00	.03	.00	28	1.9	.01	.00	.00	.00	.00
2	.00	.00	.00	.01	.00	.44	1.6	.00	.01	.00	.00	.00
3	.00	.00	.01	2.2	.01	.00	1.2	.00	.00	.00	.00	.00
4	.01	.01	.00	6.4	.01	5.2	.94	.00	.00	.00	.00	.00
5	.00	.00	.01	.01	.00	.18	.83	.00	.00	.00	.00	.00
6	.00	.00	.00	.01	.56	.00	.73	.00	.01	.00	.00	.00
7	.00	.00	.01	.01	.01	.00	.64	.00	.00	.01	.00	.00
8	.00	.01	.00	.00	.00	.01	.57	.00	.01	.02	.00	.00
9	.00	.00	.01	3.0	.00	.00	.49	.01	.00	.02	.00	.02
10	.00	.00	.03	.01	.01	.05	.40	.01	.00	.00	.00	.00
11	.01	.01	.00	.00	.00	.01	.39	.00	.00	.01	.00	.00
12	.00	.00	.02	.00	.00	.00	.32	.00	.00	.01	.00	.00
13	.00	.01	.01	.01	.00	.89	.27	.00	.00	.01	.00	.00
14	.01	.01	.00	.04	.01	.01	.31	.00	.00	.02	1.7	.00
15	.00	.00	.00	.01	.00	.10	.29	.00	.00	.01	.00	.00
16	.00	.00	.01	.00	.00	.00	.27	.01	.01	.03	.00	.00
17	.01	.00	.00	.02	.01	32	.25	.00	.00	.02	.00	.00
18	.01	.01	.00	.00	.01	166	.18	.00	.00	.03	.00	.00
19	.00	.14	.00	.00	.01	84	.10	.00	.01	.00	.00	.01
20	.00	.52	.02	.01	.00	51	.13	.00	.01	.00	.00	.00
21	.01	.02	.25	.00	.02	7.8	.10	.00	.00	.00	.00	.00
22	.00	.01	.02	.01	.02	4.0	.11	.00	.02	.00	.00	.00
23	.00	.00	.14	.00	.00	2.4	.09	.02	.01	.00	.00	.00
24	.00	.00	.00	.00	.01	7.1	.05	.00	.00	.00	.00	.00
25	.01	.05	.01	.00	.00	17	.04	.00	.00	.00	.00	.00
26	.00	.01	.00	.00	.00	25	.00	.01	.00	.00	.00	.00
27	.00	.00	.00	.01	16	19	.00	.00	.00	.00	.00	.00
28	.00	.00	.01	.00	36	7.2	.01	.00	2.0	.00	.00	.00
29	.00	.01	.01	.00	---	4.6	.00	.00	.01	.00	.00	.00
30	.00	.00	.00	.00	---	3.2	.00	.01	.01	.03	.00	.00
31	.00	---	.01	.01	---	2.3	---	.00	---	.00	.00	---
TOTAL	0.07	0.83	0.58	11.80	52.89	467.49	12.21	0.08	2.11	0.22	1.70	0.03
MEAN	.002	.028	.019	.38	1.88	15.1	.41	.003	.070	.007	.055	.001
MAX	.01	.52	.25	6.4	36	166	1.9	.02	2.0	.03	1.7	.02
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.1	1.6	1.2	23	105	927	24	.2	4.2	.4	3.4	.06

CAL YR 1990 TOTAL 68.52 MEAN .19 MAX 20 MIN .00 AC-FT 136
WTR YR 1991 TOTAL 549.81 MEAN 1.51 MAX 166 MIN .00 AC-FT 1090

11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA

LOCATION.--Lat 34°26'42", long 119°48'10", in Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank at University Drive, 0.2 mi east of Patterson Avenue, and 1.5 mi northeast of Goleta.

DRAINAGE AREA.--6.35 mi².

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Some pumping for irrigation.

AVERAGE DISCHARGE.--21 years, 1.60 ft³/s, 1,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,650 ft³/s, Jan. 16, 1978, gage height, 5.87 ft, from rating curve extended above 290 ft³/s on basis of slope-area measurement of peak flow; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 28	1115	79	2.08	Mar. 26	1645	243	2.56
Mar. 18	2300	*1,180	*4.48				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.20	1.1	.42	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.69	1.0	.43	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	1.9	.81	.39	.00	.00	.00	.00
4	.00	.00	.00	.42	.00	4.9	.76	.47	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.23	.62	.18	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.16	.52	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.06	.43	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.03	.33	.00	.00	.00	.00	.00
9	.00	.00	.00	.49	.00	.01	.35	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.01	.24	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.08	.22	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.10	.19	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.34	.16	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.49	.15	.00	.00	.00	.05	.00
15	.00	.00	.00	.00	.00	.53	.09	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.33	.07	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	71	.06	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	344	.04	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	149	e.03	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	168	e.05	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	5.5	e.04	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	1.3	.02	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.77	.01	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	6.7	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	27	.01	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	56	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	12	30	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	35	7.3	.00	.00	.02	.00	.00	.00
29	.00	.00	.00	.00	---	3.5	.15	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	2.0	.47	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	1.4	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.91	47.00	883.53	7.92	1.89	0.02	0.00	0.05	0.00
MEAN	.000	.000	.000	.029	1.68	28.5	.26	.061	.001	.000	.002	.000
MAX	.00	.00	.00	.49	35	344	1.1	.47	.02	.00	.05	.00
MIN	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	1.8	93	1750	16	3.7	.04	.00	.1	.00

CAL YR 1990 TOTAL 14.28 MEAN .039 MAX 5.5 MIN .00 AC-FT 28
WTR YR 1991 TOTAL 941.32 MEAN 2.58 MAX 344 MIN .00 AC-FT 1870

e Estimated.

11120000 ATASCADERO CREEK NEAR GOLETA, CA

LOCATION.--Lat 34°25'29", long 119°48'39", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on downstream side of center pier of county road bridge 100 ft downstream from Maria Ygnacio Creek, 1.3 mi upstream from mouth, and 1.3 mi southeast of Goleta.

DRAINAGE AREA.--18.9 mi².

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1947, published as "Alascadero Creek near Goleta."

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8.59 ft, Santa Barbara County benchmark. Prior to Dec. 14, 1967, at site 275 ft downstream, datum 4.00 ft higher. Dec. 14, 1967, to Sept. 30, 1976, at datum 4.00 ft higher; Oct. 1, 1976, to Sept. 30, 1978, at datum 2.00 ft higher, both at present site.

REMARKS.--Records fair except discharges below 1.0 ft³/s and estimated daily discharges, which are poor. No regulation upstream from station. Small diversions for irrigation upstream from station. Some low flow results from return irrigation wastewater.

AVERAGE DISCHARGE.--50 years, 4.66 ft³/s, 3,380 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,380 ft³/s, Jan. 18, 1973, gage height, 17.1 ft, present datum, from rating curve extended above 2,300 ft³/s; maximum gage height, 17.3 ft, from floodmark, Dec. 3, 1974, present datum; no flow some days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 225 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 27	2200	2,060	7.19	Mar. 18	2400	*2,360	*8.33
Mar. 1	0245	1,190	6.66	Mar. 26	unknown	500	unknown

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	e.00	250	4.4	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	e.00	36	2.7	.03	.00	.00	.00	.00
3	.00	.00	.00	.00	e.00	50	2.1	.25	.00	.00	.00	.00
4	.00	.00	.00	18	e.00	75	1.6	.29	.00	.00	.00	.00
5	.00	.00	.00	3.7	e.00	15	1.2	.11	.00	.00	.00	.00
6	.00	.00	.00	.19	e.00	.09	1.1	.09	.00	.00	.00	.00
7	.00	.00	.00	.01	e.00	.00	.93	.01	.00	.00	.00	.00
8	.00	.00	.00	.00	e.00	.00	.67	.00	.00	.02	.00	.00
9	.00	.00	.00	10	e.00	.00	.45	.00	.00	.00	.00	.00
10	.00	.00	.00	3.9	e.00	.00	.09	.00	.00	.00	.00	.00
11	.00	.00	.00	.21	e.00	.00	.06	.00	.00	.00	.00	.00
12	.00	.00	.00	.02	e.00	.00	.06	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	e.00	1.0	.06	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	e.00	.80	.06	.00	.00	.00	1.1	.00
15	.00	.00	.00	.00	e.00	.85	.06	.00	.00	.00	.84	.00
16	.00	.00	.00	.00	e.00	.23	.06	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	e.00	164	.06	.00	.00	.00	.00	.00
18	.00	.00	.00	e.00	e.00	938	.07	.00	.00	.00	.00	.00
19	.00	.00	.00	e.00	e.00	332	.05	.00	.00	.00	.00	.00
20	.00	.00	.00	e.00	e.00	294	.05	.00	.00	.00	.00	.15
21	.00	.00	.00	e.00	e.00	22	.01	.00	.00	.00	.00	.03
22	.00	.00	.00	e.00	e.00	6.8	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	e.00	e.00	2.5	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	e.00	e.00	19	.03	.00	.00	.00	.00	.00
25	.00	.00	.00	e.00	e.00	76	.02	.00	.00	.00	.00	.00
26	.00	.00	.00	e.00	e.00	e154	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	e.00	150	87	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	e.00	173	21	.00	.00	.33	.00	.00	.00
29	.00	.00	.00	e.00	---	16	.00	.00	.66	.00	.00	.00
30	.00	.00	.00	e.00	---	11	.00	.00	.00	.00	.00	.00
31	.00	---	.00	e.00	---	6.5	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	36.03	323.00	2578.77	15.89	0.78	0.99	0.02	1.94	0.18
MEAN	.000	.000	.000	1.16	11.5	83.2	.53	.025	.033	.001	.063	.006
MAX	.00	.00	.00	18	173	938	4.4	.29	.66	.02	1.1	.15
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	71	641	5110	32	1.5	2.0	.04	3.8	.4

CAL YR 1990 TOTAL 459.45 MEAN 1.26 MAX 185 MIN .00 AC-FT 911
WTR YR 1991 TOTAL 2957.60 MEAN 8.10 MAX 938 MIN .00 AC-FT 5870

e Estimated.

11120500 SAN JOSE CREEK NEAR GOLETA, CA

LOCATION.--Lat 34°27'33", long 119°48'29", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank 1.1 mi downstream from unnamed tributary and 1.7 mi northeast of Goleta.

DRAINAGE AREA.--5.51 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1941 to current year.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder and concrete low-water control. Datum of gage is 95.61 ft, Santa Barbara County Road Department datum. Prior to Dec. 24, 1955, at datum 5.50 ft higher. Dec. 24, 1955, to Jan. 10, 1960, at datum 1.5 ft higher. Prior to Oct. 1, 1971, at site 75 ft downstream.

REMARKS.--No estimated daily discharges. Records poor. No regulation upstream from station. Many small diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--50 years, 1.99 ft³/s, 1,440 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft³/s, Jan. 25, 1969, gage height, 10.10 ft, from rating curve extended above 400 ft³/s on basis of slope-area measurement at gage height 9.32 ft; maximum gage height, 12.74 ft, present datum, Jan. 21, 1943; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0215	347	5.53	Mar. 26	1615	116	4.38
Mar. 18	2245	*830	*6.81				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	55	1.7	.13	.03	.03	.00	.02
2	.00	.00	.00	.00	.00	4.7	1.5	.13	.03	.02	.00	.02
3	.00	.00	.00	.00	.00	.96	1.1	.06	.03	.03	.00	.02
4	.00	.00	.00	.00	.00	1.3	.93	.05	.03	.03	.00	.02
5	.00	.00	.00	.00	.00	1.3	1.0	.09	.02	.03	.00	.02
6	.00	.00	.00	.00	.00	2.3	.71	.03	.03	.02	.01	.02
7	.00	.00	.00	.00	.00	2.5	.56	.03	.03	.02	.00	.02
8	.00	.00	.00	.00	.00	2.4	.49	.03	.03	.02	.00	.02
9	.00	.00	.00	.00	.00	2.1	.36	.06	.02	.03	.00	.02
10	.00	.00	.00	.00	.00	2.0	.30	.10	.03	.03	.01	.01
11	.00	.00	.00	.00	.00	1.9	.12	.10	.03	.09	.00	.01
12	.00	.00	.00	.00	.00	1.7	.10	.04	.03	.02	.01	.02
13	.00	.00	.00	.00	.00	2.2	.14	.03	.03	.02	.01	.02
14	.00	.00	.00	.00	.00	1.6	.22	.03	.03	.02	.03	.02
15	.00	.00	.00	.00	.00	1.7	.22	.04	.03	.01	.03	.02
16	.00	.00	.00	.00	.00	1.8	.76	.05	.02	.01	.03	.02
17	.00	.00	.00	.00	.00	16	.65	.03	.02	.01	.02	.01
18	.00	.00	.00	.00	.00	226	.65	.03	.02	.01	.02	.01
19	.00	.00	.00	.00	.00	118	.65	.04	.02	.01	.02	.01
20	.00	.00	.00	.00	.00	129	.65	.03	.02	.02	.02	.01
21	.00	.00	.00	.00	.00	27	.65	.03	.02	.02	.02	.01
22	.00	.00	.00	.00	.00	5.3	.64	.03	.02	.02	.02	.01
23	.00	.00	.00	.00	.00	3.1	.56	.03	.02	.01	.02	.01
24	.00	.00	.00	.00	.00	4.5	.48	.03	.02	.01	.02	.00
25	.00	.00	.00	.00	.00	30	.48	.03	.02	.00	.02	.00
26	.00	.00	.00	.00	.00	39	.41	.03	.02	.01	.01	.00
27	.00	.00	.00	.00	2.2	30	.18	.03	.02	.01	.01	.00
28	.00	.00	.00	.00	4.1	14	.14	.03	.04	.00	.00	.00
29	.00	.00	.00	.00	---	9.0	.14	.03	.10	.00	.01	.00
30	.00	.00	.00	.00	---	4.9	.13	.02	.09	.00	.01	.00
31	.00	---	.00	.00	---	2.5	---	.02	---	.00	.01	---
TOTAL	0.00	0.00	0.00	0.00	6.30	743.76	16.62	1.44	0.90	0.56	0.36	0.37
MEAN	.000	.000	.000	.000	.22	24.0	.55	.046	.030	.018	.012	.012
MAX	.00	.00	.00	.00	4.1	226	1.7	.13	.10	.09	.03	.02
MIN	.00	.00	.00	.00	.00	.96	.10	.02	.02	.00	.00	.00
AC-FT	.00	.00	.00	.00	12	1480	33	2.9	1.8	1.1	.7	.7

CAL YR 1990 TOTAL 31.86 MEAN .087 MAX 10 MIN .00 AC-FT 63
WTR YR 1991 TOTAL 770.31 MEAN 2.11 MAX 226 MIN .00 AC-FT 1530

11120510 SAN JOSE CREEK AT GOLETA, CA

LOCATION.--Lat 34°25'49", long 119°49'16", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank south of Hollister Avenue on Kellogg Avenue and 0.5 mi southeast of Goleta.

DRAINAGE AREA.--9.42 mi².

PERIOD OF RECORD.--October 1970 to current year.

REVISED RECORDS.--WDR CA-75-1: 1973(M).

GAGE.--Water-stage recorder and concrete channel. Elevation of gage is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation upstream from station. Diversions for irrigation and domestic use upstream from station.

AVERAGE DISCHARGE.--21 years, 2.72 ft³/s, 1,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,330 ft³/s, Mar. 4, 1978, gage height, 5.65 ft, from rating curve extended above 400 ft³/s on basis of slope-conveyance computation of flow in concrete channel at gage height 8.00 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0230	425	2.81	Mar. 18	2400	*810	*4.06

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	56	e2.2	.00	.01	.01	e.00	.00
2	.00	.00	.00	.00	.00	2.4	e1.8	.03	.00	.02	e.00	.00
3	.00	.00	.00	.50	.00	.68	e1.5	.00	.00	.01	e.00	.01
4	.00	.00	.00	1.5	.00	2.5	e1.4	.02	.01	.02	e.00	.00
5	.00	.00	.00	.08	.04	.90	e1.3	.00	.00	.01	e.00	.01
6	.00	.00	.00	.03	.02	.44	e1.3	.01	.01	.02	e.00	.00
7	.00	.00	.00	.05	.01	.20	e1.0	.02	.00	.01	e.00	.02
8	.00	.00	.00	.02	.00	.12	e1.0	.00	.01	.23	e.00	.00
9	.00	.00	.00	1.2	.00	.11	e.75	.02	.00	.03	e.00	.03
10	.00	.00	.00	.04	.00	.11	e.75	.00	.00	.01	e.00	.04
11	.00	.00	.00	.02	.00	.09	e.75	.01	.02	.02	e.00	.02
12	.00	.00	.00	.00	.00	.08	e.60	.00	.00	.02	e.00	.03
13	.00	.00	.00	.00	.00	.49	e.50	.00	.03	.02	e.00	.02
14	.00	.00	.00	.00	.03	.11	e.40	.01	.01	.02	.53	.03
15	.00	.00	.00	.00	.02	.16	e.30	.00	.02	.01	.03	.02
16	.00	.00	.00	.00	.01	.09	e.25	.02	.00	.03	.01	.01
17	.00	.00	.00	.00	.00	27	e.25	.01	.00	e.00	.01	.04
18	.00	.00	.00	.00	.00	235	e.25	.01	.02	e.00	.01	.02
19	.00	.00	.00	.00	.00	117	e.20	.00	.00	e.00	.00	.02
20	.00	.00	.00	.00	.00	e110	e.15	.00	.04	e.00	.00	.02
21	.00	.00	.00	.09	.00	e52	e.10	.01	.01	e.00	.00	.02
22	.00	.00	.00	.03	.00	e8.0	e.09	.00	.02	e.00	.02	.01
23	.00	.00	.00	.01	.00	e2.0	e.30	.02	.00	e.00	.01	.01
24	.00	.00	.00	.00	.00	e2.5	.60	.00	.00	e.00	.01	.02
25	.00	.00	.00	.00	.00	e5.0	.71	.01	.02	e.00	.00	.01
26	.00	.00	.00	.00	.00	26	.99	.00	.00	e.00	.01	.02
27	.00	.00	.00	.00	4.2	22	.24	.00	.01	e.00	.01	.01
28	.00	.00	.00	.00	19	5.3	.01	.01	.31	e.00	.00	.02
29	.00	.00	.00	.00	---	e4.0	.00	.00	.04	e.00	.01	.01
30	.00	.00	.00	.00	---	e2.5	.03	.01	.01	e.00	.00	.02
31	.00	---	.00	.00	---	e2.2	---	.00	---	e.00	.02	---
TOTAL	0.00	0.00	0.00	3.57	23.33	684.98	19.72	0.22	0.60	0.49	0.68	0.49
MEAN	.000	.000	.000	.12	.83	22.1	.66	.007	.020	.016	.022	.016
MAX	.00	.00	.00	1.5	19	235	2.2	.03	.31	.23	.53	.04
MIN	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	7.1	46	1360	39	.4	1.2	1.0	1.3	1.0

CAL YR 1990	TOTAL	53.58	MEAN	.15	MAX	21	MIN	.00	AC-FT	106
WTR YR 1991	TOTAL	734.08	MEAN	2.01	MAX	235	MIN	.00	AC-FT	1460

e Estimated.

11120530 TECOLOTITO CREEK NEAR GOLETA, CA

LOCATION.--Lat 34°26'05", long 119°52'04", in Los Dos Pueblos Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank 0.2 mi east of Glen Annie Road and 2.1 mi west of Goleta.

DRAINAGE AREA.--4.42 mi².

PERIOD OF RECORD.--October 1970 to September 1972, January 1980 to September 1982, October 1987 to September 1991 (discontinued).

REVISED RECORDS.--WDR CA-89-1: 1988(P).

GAGE.--Water-stage recorder and concrete channel. Elevation of gage is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 25, 1980, at same site at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Some pumping for irrigation and water is occasionally released to channel from Tecolote tunnel.

AVERAGE DISCHARGE.--8 years (water years 1971-72, 1981-82, 1988-91), 0.72 ft³/s, 522 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,610 ft³/s, Feb. 16, 1980, gage height, 4.47 ft, from rating curve extended above 160 ft³/s on basis of slope-conveyance computation of flow in concrete channel; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0215	273	2.84	Mar. 24	2230	139	2.46
Mar. 18	2115	*1,310	*4.40				

Minimum daily, 0.01 ft³/s, for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.03	.03	.02	.04	39	e.46	.49	.29	.22	.19	.14
2	.05	.03	.02	.04	.05	.64	e.45	.34	.30	.23	.17	.12
3	.05	.01	.02	.12	.05	.31	e.44	.33	.30	.27	.17	.11
4	.07	.01	.02	.78	.04	1.6	e.44	.35	.29	.28	.19	.09
5	.03	.02	.02	.12	.04	.45	e.44	.32	.29	.27	.21	.10
6	.04	.04	.02	.05	.04	.25	e.40	.34	.30	.24	.19	.09
7	.05	.01	.02	.06	.04	.19	e.40	.35	.25	.23	.17	.11
8	.04	.01	.02	.06	.03	.17	e.40	.38	.25	.27	.16	.12
9	.04	.04	.03	.78	.03	.16	e.40	.34	.29	.27	.14	.13
10	.03	.02	.03	.14	.02	.16	e.40	.36	.29	.25	.14	.11
11	.03	.03	.03	.08	.03	.12	e.42	.36	.31	.26	.13	.08
12	.03	.02	.04	.08	.03	.12	e.42	.33	.29	.27	.16	.12
13	.03	.02	.04	.08	.03	.31	e.42	.40	.28	.25	.20	.14
14	.03	.03	.05	.06	.03	.15	e.42	.36	.27	.22	.44	.16
15	.05	.03	.04	.06	.02	.16	e.44	.36	.26	.20	.27	.16
16	.05	.03	.03	.06	.02	.11	e.44	.39	.29	.19	.21	.15
17	.05	.03	.02	.06	.03	6.6	e.44	.38	.24	.20	.18	.13
18	.03	.03	.02	.06	.02	209	e.44	.38	.25	.20	.17	.13
19	.04	.04	.02	.07	.03	93	e.44	.40	.21	.22	.17	.13
20	.03	.04	.02	.07	.02	e100	e.44	.39	.16	.24	.17	.12
21	.03	.02	.01	.07	.02	e20	e.44	.26	.17	.24	.15	.13
22	.02	.02	.02	.06	.02	e1.6	e.44	.37	.14	.24	.14	.11
23	.02	.02	.02	.05	.02	e1.0	e.44	.32	.15	.23	.12	.11
24	.02	.03	.04	.05	.03	5.1	e.44	.30	.19	.21	.12	.11
25	.02	.04	.03	.05	.02	15	.45	.31	.20	.25	.13	.09
26	.02	.03	.09	.04	.03	16	.43	.33	.18	.25	.15	.08
27	.02	.02	.03	.05	3.7	17	.41	.29	.20	.21	.15	.08
28	.04	.02	.02	.05	7.4	6.1	.38	.29	.41	.18	.14	.09
29	.04	.03	.02	.04	---	3.6	.38	.28	.29	.01	.15	.09
30	.03	.03	.01	.05	---	.79	.39	.29	.23	.01	.16	.09
31	.03	---	.02	.05	---	.47	---	.29	---	.04	.15	---
TOTAL	1.10	0.78	0.85	3.41	11.88	539.16	12.75	10.68	7.57	6.65	5.39	3.42
MEAN	.035	.026	.027	.11	.42	17.4	.42	.34	.25	.21	.17	.11
MAX	.07	.04	.09	.78	7.4	209	.46	.49	.41	.28	.44	.16
MIN	.02	.01	.01	.02	.02	.11	.38	.26	.14	.01	.12	.08
AC-FT	2.2	1.5	1.7	6.8	24	1070	25	21	15	13	11	6.8

CAL YR 1990 TOTAL 28.54 MEAN .078 MAX 6.8 MIN .00 AC-FT 57
WTR YR 1991 TOTAL 603.64 MEAN 1.65 MAX 209 MIN .01 AC-FT 1200

e Estimated.

11121000 SANTA YNEZ RIVER AT JAMESON LAKE, NEAR MONTECITO, CA

LOCATION.--Lat 34°29'32", long 119°30'25", in NE 1/4 NW 1/4 sec.28, T.5 N., R.25 W., Santa Barbara County, Hydrologic Unit 18060010, on upstream face of Juncal Dam, 6.5 mi north of Carpinteria, and 8 mi northeast of Montecito.

DRAINAGE AREA.--13.9 mi², excludes area of Alder Creek.

PERIOD OF RECORD.--December 1930 to current year. Prior to October 1938, published as "at Juncal Reservoir, near Montecito."

GAGE.--Two water-stage recorders. Datum of lake gage is 2,021.6 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). Supplementary gage and sharp-crested weir on outlet conduit of lake release, at different datum.

REMARKS.--Records of total inflow represent all water reaching Jameson Lake, including precipitation on the lake. Total inflow computed on basis of records of storage, diversion (draft) to city of Montecito, spill and release to river, evaporation, and seepage. Records of net inflow exclude precipitation on lake surface. Monthly evaporation from lake surface computed on basis of evaporation from U.S. Weather Bureau Class A land pan. Area and capacity tables are based on survey made in 1980. Lake capacity at spillway level, gage height 223.82 ft, 5,725 acre-ft. Dead storage, 32 acre-ft, below lowest outlet at gage height 139.0 ft included in these records. There is no regulation or diversion upstream from station. At times flow of Alder Creek, which enters Santa Ynez River 2 mi downstream from Juncal Dam, is diverted at elevation 2,250 ft through a tunnel to Jameson Lake and is included in these records.

COOPERATION.--Reservoir-operation records and related data provided by Montecito Water District.

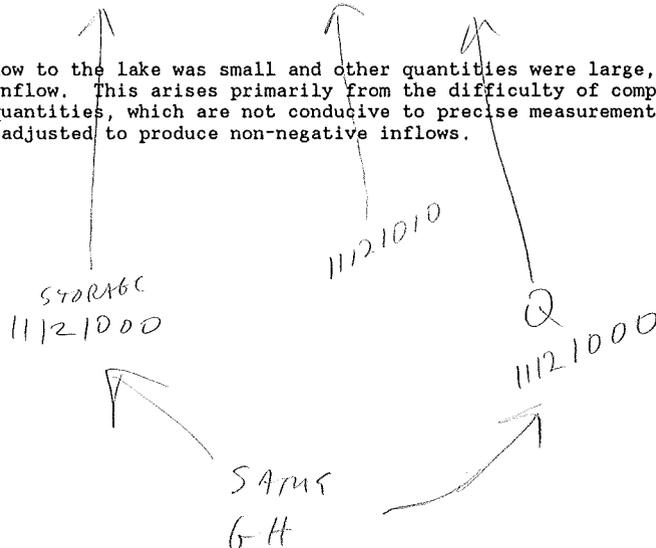
AVERAGE DISCHARGE.--60 years (water years 1932-91), 6.87 ft³/s, 4,980 acre-ft/yr.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Spill and release (acre-feet)	Evaporation and seepage (acre-feet)	Total inflow (acre-feet)	Rain on reservoir (acre-feet)	Net inflow (acre-feet)
Sept. 30.....	2,181.43	1,570	--	--	--	--	--	--	--
Oct. 31.....	2,179.31	1,440	-130	132	0	14	16	0	16
Nov. 30.....	2,177.25	1,330	-110	121	0	9	20	2	18
Dec. 31.....	2,175.25	1,210	-120	111	0	9	0	0	0
CAL YR 1990.....	--	--	-1,180	1,253	0	244	319	88	231
Jan. 31.....	2,174.59	1,180	-30	67	0	5	42	8	34
Feb. 28.....	2,173.70	1,140	-40	66	0	7	33	2	31
Mar. 31.....	2,222.41	5,540	4,400	61	0	5	4,466	215	4,251
Apr. 30.....	2,223.95	5,740	200	61	793	18	1,072	0	1,072
May 31.....	2,223.73	5,710	-30	87	201	20	278	0	278
June 30.....	2,223.11	5,630	-80	81	0	42	43	5	38
July 31.....	2,222.21	5,520	-110	68	0	42	0	0	0
Aug. 31.....	2,221.29	5,400	-120	70	0	50	0	0	0
Sept. 30.....	2,219.90	5,220	-180	77	0	103	0	0	0
WTR YR 1991.....	--	--	3,650	1,002	994	324	5,970	232	5,738

a Elevation at 0800.

NOTE.--For months when inflow to the lake was small and other quantities were large, preliminary computations may indicate negative net inflow. This arises primarily from the difficulty of computing net inflow as the residual of several large quantities, which are not conducive to precise measurement. When this occurs, evaporation and seepage is adjusted to produce non-negative inflows.



SANTA YNEZ RIVER BASIN

11122000 SANTA YNEZ RIVER ABOVE GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.--Lat 34°31'34", long 119°41'08", in NW 1/4 SW 1/4 sec.11, T.5 N., R.27 W., Santa Barbara County, Hydrologic Unit 18060010, on upstream face of Gibraltar Dam and 7 mi north of Santa Barbara.

DRAINAGE AREA.--216 mi².

PERIOD OF RECORD.--April 1920 to current year. November 1903 to November 1918 (fragmentary) at river station at damsite; records not equivalent because records since April 1920 are based on operation of Gibraltar Reservoir, and since December 1930, Jameson Lake. Prior to October 1945, published as "Santa Ynez River near Santa Barbara."

REVISED RECORDS.--WDR CA-86-1: 1934-43.

GAGE.--Two water-stage recorders. Datum of gage is National Geodetic Vertical Datum of 1929. Supplementary gage and sharp-crested weir on diversion from reservoir at different datum. See WSP 1735 for history of changes on both gages prior to Oct. 1, 1955. Spill and release measured by streamgaging station below dam (station 11123000).

REMARKS.--Records of total inflow represent all water reaching Gibraltar Reservoir, including precipitation on reservoir. Total inflow computed on basis of records of storage, diversion (draft) to city of Santa Barbara, spill and release to river, evaporation, and seepage. Records of net inflow exclude precipitation on reservoir surface. Monthly evaporation from reservoir surface computed on basis of evaporation from U.S. Weather Bureau Class A land pan. Area and capacity tables are based on survey made in February 1989. Reservoir capacity at spillway level, elevation, 1,399.82 ft, 8,440 acre-feet. Lowest outlet at elevation 1,333.86 ft. Flow regulated by Jameson Lake (station 11121000) since December 1930.

COOPERATION.--Reservoir-operation records and related data provided by city of Santa Barbara.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Eleva- tion (feet)a	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Spill and release (acre- feet)	Evapo- ration and seepage (acre- feet)	Total inflow (acre- feet)	Rain on reservoir (acre- feet)	Net inflow (acre- feet)
Sept. 30.....	--	--	--	--	--	--	--	--	--
Oct. 31.....	--	0	0	0	0	0	0	0	0
Nov. 30.....	--	0	0	0	0	0	0	0	0
Dec. 31.....	--	0	0	0	0	0	0	0	0
CAL YR 1990.....	--	--	0	0	0	0	0	0	0
Jan. 31.....	--	0	0	0	0	0	0	0	0
Feb. 28.....	--	0	0	0	0	0	0	0	0
Mar. 31.....	1,400.29	8,560	8,560	105	22,930	28	31,623	382	31,241
Apr. 30.....	1,400.21	8,540	-20	236	6,650	107	6,973	1	6,972
May 31.....	1,400.09	8,510	-30	416	860	136	1,382	0	1,382
June 30.....	1,399.08	8,250	-260	540	45	205	530	1	529
July 31.....	1,397.42	7,820	-430	177	261	228	236	9	227
Aug. 31.....	1,395.10	7,220	-600	162	318	134	14	0	14
Sept. 30.....	1,394.06	6,970	-250	171	0	107	28	0	28
WTR YR 1991.....	--	--	6,970	1,807	31,064	945	40,786	393	40,393

a Elevation at 0800.

NOTE.--For months when inflow to the reservoir was small and other quantities were large, negative figures of inflow may appear. This arises primarily from the difficulty of computing inflow as the residual of several larger quantities, which are not conducive to precise measurement. When this occurs, evaporation and seepage is adjusted to produce non-negative inflows. Reservoir dry Oct. 1 to Feb. 28.

Handwritten notes:
 11122000
 11121000
 11123000
 (includes 11122010)

11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.--Lat 34°31'28", long 119°41'11", in SW 1/4 SW 1/4 sec.11, T.5 N., R.27 W., Santa Barbara County, Hydrologic Unit 18060010, on left bank 700 ft downstream from Gibraltar Dam and 7 mi north of Santa Barbara.

DRAINAGE AREA.--216 mi².

PERIOD OF RECORD.--April 1920 to current year (monthly discharge only prior to October 1941).

REVISED RECORDS.--WDR CA-86-1: 1934-43.

GAGE.--Two water-stage recorders. Datum of gage on main channel is 1,227 ft above National Geodetic Vertical Datum of 1929. Supplementary gage and sharp-crested weir on the release channel from Gibraltar Dam to river at different datum. See WSP 1735 for history of changes on both gages prior to May 20, 1958.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Jameson Lake (station 11121000) and Gibraltar Reservoir (station 11122000). City of Santa Barbara diverted 1,807 acre-ft during current year from Gibraltar Reservoir; Montecito Water District diverted 1,002 acre-ft during current year from Jameson Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,200 ft³/s, Jan. 25, 1969, gage height, 25.8 ft, from rating curve extended above 2,100 ft³/s on basis of computations of flow from gate openings and flow over dam at gage heights 17.5 and 25.8 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,020 ft³/s, Mar. 19, gage height, 14.75; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	310	31	7.3	.00	16	.00
2	.00	.00	.00	.00	.00	.00	266	28	9.6	.00	16	.00
3	.00	.00	.00	.00	.00	.00	303	26	3.7	.00	16	.00
4	.00	.00	.00	.00	.00	.00	192	23	.93	.00	17	.00
5	.00	.00	.00	.00	.00	.00	240	22	.59	.00	17	.00
6	.00	.00	.00	.00	.00	.00	228	22	.08	.00	16	.00
7	.00	.00	.00	.00	.00	.00	231	23	.07	.00	17	.00
8	.00	.00	.00	.00	.00	.00	139	22	.04	.00	17	.00
9	.00	.00	.00	.00	.00	.00	146	22	.04	.00	17	.00
10	.00	.00	.00	.00	.00	.00	133	21	.04	.00	16	.00
11	.00	.00	.00	.00	.00	.00	112	20	.05	.00	11	.00
12	.00	.00	.00	.00	.00	.00	106	19	.02	.00	.03	.00
13	.00	.00	.00	.00	.00	.00	98	13	.02	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	91	14	.01	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	49	16	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	52	15	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	62	12	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	62	10	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	2230	62	9.9	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	1940	59	8.8	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	803	56	8.4	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	321	53	8.3	.00	2.0	.00	.00
23	.00	.00	.00	.00	.00	324	50	8.2	.00	13	.00	.00
24	.00	.00	.00	.00	.00	208	47	6.8	.00	12	.00	.00
25	.00	.00	.00	.00	.00	729	45	5.9	.00	13	.00	.00
26	.00	.00	.00	.00	.00	1180	43	5.3	.00	13	1.1	.00
27	.00	.00	.00	.00	.00	1350	41	4.9	.00	14	.02	.00
28	.00	.00	.00	.00	.00	708	25	4.0	.00	15	.00	.00
29	.00	.00	.00	.00	---	753	23	2.0	.00	15	.00	.00
30	.00	.00	.00	.00	---	489	31	.99	.00	16	.00	.00
31	.00	---	.00	.00	---	526	---	1.2	---	16	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	11561.00	3355	433.69	22.49	129.00	177.15	0.00
MEAN	.000	.000	.000	.000	.000	373	112	14.0	.75	4.16	5.71	.000
MAX	.00	.00	.00	.00	.00	2230	310	31	9.6	16	17	.00
MIN	.00	.00	.00	.00	.00	.00	23	.99	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	22930	6650	860	45	256	351	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 15678.33 MEAN 43.0 MAX 2230 MIN .00 AC-FT 31100

SANTA YNEZ RIVER BASIN

11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°32'37", long 119°51'50", in San Marcos Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 0.3 mi downstream from Los Laureles Canyon Creek, 10 mi downstream from Gibraltar Reservoir, and 13.3 mi east of Santa Ynez.

DRAINAGE AREA.--277 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1947 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 787.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records poor. Flow regulated by Jameson Lake and Gibraltar Reservoir (stations 11121000 and 11122000). Water diverted out of basin from these reservoirs to cities of Montecito and Santa Barbara for municipal supply. Low flow affected by intermittent pumping for irrigation from infiltration gallery in riverbed at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 67,500 ft³/s, Jan. 25, 1969, gage height, 18.88 ft, from rating curve extended above 11,600 ft³/s on basis of peak flow for station below Gibraltar Dam plus tributary inflow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,140 ft³/s, Mar. 19, gage height, 8.07 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	49	407	43	3.9	.66	10	.03
2	.00	.00	.00	.00	.00	29	330	40	3.1	.56	12	.03
3	.00	.00	.00	.00	.00	3.0	330	37	7.5	.51	14	.03
4	.00	.00	.00	.00	.00	.16	289	34	7.5	.48	16	.03
5	.00	.00	.00	.00	.00	2.8	295	31	4.2	.41	17	.03
6	.00	.00	.00	.00	.00	1.3	259	30	2.7	.41	19	.02
7	.00	.00	.00	.00	.00	.17	279	29	2.1	.41	19	.02
8	.00	.00	.00	.00	.00	.01	224	31	1.8	.40	19	.02
9	.00	.00	.00	.00	.00	.00	153	29	1.4	.39	19	.02
10	.00	.00	.00	.00	.00	.00	192	29	1.0	.42	19	.02
11	.00	.00	.00	.00	.00	.00	130	27	.83	.39	19	.02
12	.00	.00	.00	.00	.00	.00	131	27	.67	.41	18	.02
13	.00	.00	.00	.00	.00	.00	123	25	.60	.50	9.9	.02
14	.00	.00	.00	.00	.00	.00	114	18	.53	.45	3.3	.02
15	.00	.00	.00	.00	.00	.00	100	18	.50	.49	1.4	.02
16	.00	.00	.00	.00	.00	.00	70	20	.41	.60	.89	.02
17	.00	.00	.00	.00	.00	7.5	81	19	.32	.60	.57	.02
18	.00	.00	.00	.00	.00	1490	83	17	.26	.44	.41	.01
19	.00	.00	.00	.00	.00	2410	82	15	.19	.29	.33	.01
20	.00	.00	.00	.00	.00	1730	79	15	.17	.21	.28	.01
21	.00	.00	.00	.00	.00	823	78	14	.20	.14	.23	.01
22	.00	.00	.00	.00	.00	464	75	13	.22	.09	.19	.00
23	.00	.00	.00	.00	.00	411	69	12	.25	.07	.16	.00
24	.00	.00	.00	.00	.00	291	67	11	.25	.07	.13	.00
25	.00	.00	.00	.00	.00	705	63	10	.29	.07	.10	.00
26	.00	.00	.00	.00	.00	943	60	8.8	.29	.05	.08	.00
27	.00	.00	.00	.00	.00	1430	55	7.8	.34	.04	.07	.00
28	.00	.00	.00	.00	.00	787	52	6.7	.52	.04	.06	.00
29	.00	.00	.00	.00	---	726	32	6.3	.82	.03	.05	.00
30	.00	.00	.00	.00	---	508	34	5.3	.76	.08	.04	.00
31	.00	---	.00	.00	---	505	---	4.7	---	5.2	.03	---
TOTAL	0.00	0.00	0.00	0.00	0.00	13315.94	4336	633.6	43.62	14.91	219.22	0.43
MEAN	.000	.000	.000	.000	.000	430	145	20.4	1.45	.48	7.07	.014
MAX	.00	.00	.00	.00	.00	2410	407	43	7.5	5.2	19	.03
MIN	.00	.00	.00	.00	.00	.00	32	4.7	.17	.03	.03	.00
AC-FT	.00	.00	.00	.00	.00	26410	8600	1260	87	30	435	.9
CAL YR 1990	TOTAL	10.76	MEAN	.029	MAX	10	MIN	.00	AC-FT	21		
WTR YR 1991	TOTAL	18563.72	MEAN	50.9	MAX	2410	MIN	.00	AC-FT	36820		

SANTA YNEZ RIVER BASIN

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°35'48", long 119°54'28", in San Marcos Grant, Santa Barbara County, Hydrologic Unit 18060010, on right bank 0.6 mi downstream from Pine Canyon and 9.9 mi east of Santa Ynez.

DRAINAGE AREA.--74.0 mi².

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 783.38 ft above National Geodetic Vertical Datum of 1929. See WSP 1735 for history of changes prior to Sept. 27, 1952. Sept. 27, 1952, to June 24, 1969, at datum 3.25 ft higher.

REMARKS.--Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--50 years, 16.8 ft³/s, 12,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft³/s, Feb. 24, 1969, gage height, 14.45 ft, from floodmark, present datum, from rating curve extended above 2,500 ft³/s on basis of slope-area measurement at gage height 14.16 ft; no flow at times since 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*), from rating curve extended above 160 ft³/s on basis of slope-area measurement at gage height 12.10 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0830	666	9.45	Mar. 19	0015	*3,100	*11.87
Mar. 4	2200	655	9.43	Mar. 26	1630	420	8.95

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	244	e133	16	5.3	2.8	.16	.00
2	.00	.00	.00	.00	.00	42	e118	16	5.2	2.0	.14	.00
3	.00	.00	.00	.00	.00	10	e110	16	5.3	1.5	.14	.00
4	.00	.00	.00	.00	.00	62	e99	15	5.0	1.3	.13	.00
5	.00	.00	.00	.00	.00	107	e92	14	4.8	1.1	.12	.00
6	.00	.00	.00	.00	.00	18	e85	14	4.8	.97	.11	.00
7	.00	.00	.00	.00	.00	9.5	e78	13	4.8	.91	.10	.00
8	.00	.00	.00	.00	.00	5.6	e73	13	4.6	.84	.09	.00
9	.00	.00	.00	.00	.00	3.5	e68	12	4.6	.89	.08	.00
10	.00	.00	.00	.00	.00	2.5	e64	12	4.4	.96	.07	.00
11	.00	.00	.00	.00	.00	2.3	e58	12	3.9	.90	.06	.00
12	.00	.00	.00	.00	.00	1.7	e55	11	3.9	.83	.06	.00
13	.00	.00	.00	.00	.00	2.0	e50	11	4.0	.74	.05	.00
14	.00	.00	.00	.00	.00	2.4	e47	10	4.0	.74	.04	.00
15	.00	.00	.00	.00	.00	1.9	e43	10	4.0	.72	.03	.00
16	.00	.00	.00	.00	.00	1.9	e38	9.4	3.9	.68	.03	.00
17	.00	.00	.00	.00	.00	3.2	e36	8.8	3.3	.67	.02	.00
18	.00	.00	.00	.00	.00	977	e33	8.8	3.0	.62	.01	.00
19	.00	.00	.00	.00	.00	735	28	9.0	2.9	.58	.00	.00
20	.00	.00	.00	.00	.00	327	27	8.8	2.9	.51	.00	.00
21	.00	.00	.00	.00	.00	274	26	8.7	2.9	.49	.00	.00
22	.00	.00	.00	.00	.00	265	25	8.5	2.8	.44	.00	.00
23	.00	.00	.00	.00	.00	259	24	7.6	2.8	.42	.00	.00
24	.00	.00	.00	.00	.00	258	23	7.1	2.8	.34	.00	.00
25	.00	.00	.00	.00	.00	258	22	6.6	2.8	.32	.00	.00
26	.00	.00	.00	.00	.00	288	21	6.3	3.1	.27	.00	.00
27	.00	.00	.00	.00	.00	222	20	6.3	3.2	.24	.00	.00
28	.00	.00	.00	.00	7.9	180	19	6.4	3.4	.23	.00	.00
29	.00	.00	.00	.00	---	178	18	5.9	4.2	.20	.00	.00
30	.00	.00	.00	.00	---	164	17	5.9	3.8	.19	.00	.00
31	.00	---	.00	.00	---	155	---	5.9	---	.17	.00	---
TOTAL	0.00	0.00	0.00	0.00	7.90	5059.5	1550	315.0	116.4	23.57	1.44	0.00
MEAN	.000	.000	.000	.000	.28	163	51.7	10.2	3.88	.76	.046	.000
MAX	.00	.00	.00	.00	7.9	977	133	16	5.3	2.8	.16	.00
MIN	.00	.00	.00	.00	.00	1.7	17	5.9	2.8	.17	.00	.00
AC-FT	.00	.00	.00	.00	16	10040	3070	625	231	47	2.9	.00

CAL YR 1990 TOTAL 24.03 MEAN .066 MAX 1.2 MIN .00 AC-FT 48
WTR YR 1991 TOTAL 7073.81 MEAN 19.4 MAX 977 MIN .00 AC-FT 14030

e Estimated.

11125500 LAKE CACHUMA NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°34'57", long 119°58'47", in Lomas de la Purification Grant, Santa Barbara County, Hydrologic Unit 18060010, at Bradbury Dam on Santa Ynez River, on upstream face near left end of dam, and 6.1 mi east of Santa Ynez.

DRAINAGE AREA.--417 mi².

PERIOD OF RECORD.--November 1952 to current year. Prior to October 1985, only monthend elevations and contents and total diversions published. November 1952 to October 1960, published as "Cachuma Reservoir near Santa Ynez."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). Prior to Oct. 1, 1965, nonrecording gage.

REMARKS.--Reservoir is formed by earthfill dam. Storage began November 1952. Dead storage below outlet gage to river, elevation, 600 ft, 531 acre-ft, included in contents. Capacity below sill of inlet to Tecolote tunnel, elevation, 660 ft, 26,771 acre-ft; below spillway level, elevation, 720 ft, 113,716 acre-ft; and below top of four radial gates, elevation, 750 ft, 190,409 acre-ft. Water is released from outlet to Santa Ynez River to satisfy downstream water rights. Water diverted to Tecolote tunnel for use by city of Santa Barbara, nearby communities, Santa Ynez River Water Conservation District, and Cachuma recreation area.

COOPERATION.--Reservoir elevation, contents, and diversion figures provided by U.S. Bureau of Reclamation. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 221,100 acre-ft, Feb. 24, 1969, elevation, 755.11 ft; minimum since initial filling in April 1958, 27,681 acre-ft, Feb. 27, 1991, elevation 661.06 ft.

EXTREMES (AT 0800) FOR CURRENT YEAR.--Maximum contents, 75,530 acre-ft, May 8, elevation, 699.73 ft; minimum, 27,681 acre-ft, Feb. 27, elevation, 661.06 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on surveys by U.S. Bureau of Reclamation)

660	26,771	675	41,474	690	60,576
665	31,199	680	47,346	695	68,009
670	36,074	685	53,691	700	75,972

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34138	32530	31016	29476	28545	28170	66210	75301	74892	69264	65923	63502
2	34098	32454	30970	29449	28519	28598	67062	75301	74876	69124	65848	63399
3	34038	32416	30925	29431	28484	28678	67795	75350	74860	68985	65728	63267
4	34000	32368	30870	29440	28335	28687	68536	75367	74827	68815	65622	63252
5	33961	32321	30815	29431	28431	28970	69233	75432	74794	68660	65516	63150
6	33931	32282	30751	29395	28414	29050	69888	75481	74745	68474	65426	63047
7	33892	32225	30705	29386	28379	29076	70437	75514	74516	68334	65336	62945
8	33844	32159	30651	29368	28335	29085	70955	75530	74271	68164	65260	62827
9	33814	32111	30596	29368	28292	29085	71447	75448	73997	67963	65185	62725
10	33766	32083	30532	29324	28257	29085	71749	75448	73738	67902	65125	62622
11	33736	32009	30477	29298	28231	29094	72116	75448	73448	67841	65064	62490
12	33678	31944	30440	29253	28204	29094	72386	75465	73189	67765	65004	62417
13	33619	31888	30404	29227	28161	29103	72594	75465	72931	67688	64989	62329
14	33561	31832	30312	29218	28152	29094	72866	75448	72657	67612	64929	62256
15	33522	31767	30231	29165	28109	29085	73076	75432	72371	67551	64855	62168
16	33463	31711	30132	29121	28082	29103	73383	75448	72116	67474	64796	62080
17	33415	31655	30060	29085	28013	29112	73577	75416	71845	67383	64721	62036
18	33375	31581	30033	29041	27978	29683	73755	75318	71638	67306	64617	61963
19	33327	31506	30015	28997	27934	38800	73916	75301	71399	67214	64558	61891
20	33239	31469	29970	28970	27917	44474	73932	75285	71144	67123	64483	61819
21	33151	31413	29925	28944	27882	48120	74110	75301	70924	67031	64394	61761
22	33083	31376	29880	28908	27856	49824	74320	75285	70704	66939	64305	61689
23	33016	31348	29836	28864	27812	50725	74467	75269	70484	66863	64230	61631
24	32978	31311	29800	28828	27760	51493	74598	75269	70280	66756	64171	61559
25	32931	31255	29773	28793	27708	52565	74712	75252	70045	66664	64097	61501
26	32873	31227	29746	28766	27690	53718	74810	75203	69903	66542	64052	61429
27	32826	31181	29719	28722	27681	56024	74958	75138	69762	66436	63933	61270
28	32768	31135	29665	28705	27699	60377	75056	75105	69621	66330	63784	61154
29	32730	31108	29593	28651	---	62109	75170	75056	69481	66240	63725	61067
30	32664	31062	29521	28634	---	63755	75252	75007	69357	66150	63636	60995
31	32606	---	29494	28598	---	65034	---	74941	---	66044	63561	---
MAX	34138	32530	31016	29476	28545	65034	75252	75530	74892	69264	65923	63502
MIN	32606	31062	29494	28598	27681	28170	66210	74941	69357	66044	63561	60995
a	666.50	664.85	663.12	662.11	661.31	693.04	699.56	699.37	695.87	693.71	692.05	690.29
b	-1,582	-1,544	-1,568	-896	-699	+37,135	+10,218	-311	-5,584	-3,313	-2,483	-2,566
c	1,534	1,580	1,697	1,170	1,035	156	784	1,684	1,494	2,100	2,112	2,113

CAL YR 1990 b -30,700

WTR YR 1991 b +26,807

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Diversions, in acre-ft, to Tecolote tunnel.

SANTA YNEZ RIVER BASIN

11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA

LOCATION.--Lat 34°37'06", long 120°07'11", in NW 1/4 NW 1/4 sec.11, T.6 N., R.31 W., Santa Barbara County, Hydrologic Unit 18060010, on right bank at downstream side of bridge on Alamo Pintado Road, 1.5 mi northeast of Solvang.

DRAINAGE AREA.--29.4 mi².

PERIOD OF RECORD.--October 1970 to September 1985, October 1989 to September 1990. Records prior to October 1970 in files of Santa Barbara County Flood Control District.

GAGE.--Water-stage recorder. Datum of gage is 540.49 ft, Santa Barbara County datum.

REMARKS.--Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation.

AVERAGE DISCHARGE.--17 years (water years 1971-85, 1990-91), 0.84 ft³/s, 609 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 900 ft³/s, Mar. 1, 1983, gage height, 6.10 ft, from rating curve extended above 70 ft³/s on basis of slope-area measurements at gage heights 4.90 ft and 5.51 ft; maximum gage height, 6.80 ft, Feb. 9, 1978, from floodmark; no flow most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 10.32 ft, from information provided by Santa Barbara County Flood Control District.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 18	unknown	*865	*6.00	Mar. 26	1730	262	3.64

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	e.05	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	249	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	112	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	19	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	7.8	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.83	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	42	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	65	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	44	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	2.1	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.25	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.02	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	544.19	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	17.6	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	249	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	1080	.00	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 544.19 MEAN 1.49 MAX 249 MIN .00 AC-FT 1080

e Estimated.

11128300 ALISAL RESERVOIR NEAR SOLVANG, CA

LOCATION.--Lat 34°32'56", Long 120°07'45", in NE 1/4 NW 1/4 sec.4, T.5 N., R.31 W., Santa Barbara County, Hydrologic Unit 18060010, in cove on right bank 0.4 mi upstream from reservoir spillway and 3 mi south of Solvang.

DRAINAGE AREA.--7.83 mi².

PERIOD OF RECORD.--December 1971 to current year. Prior to October 1985, only monthend elevations and contents published.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by earthfill dam. Storage began Dec. 19, 1970. Usable capacity, 2,260 acre-ft between bottom of outlet gate at elevation 555.70 ft, and crest of spillway at elevation 599.88 ft. Dead storage, 110 acre-ft. Inflow must total 150 acre-ft during any one month between November and June in order to store flows for that water year.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,770 acre-ft, Mar. 4, 1978, elevation, 604.31 ft; minimum, 748 acre-ft, Nov. 8-10, 1972, elevation, 577.15 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 2,450 acre-ft, Mar. 26, elevation, 600.77 ft; minimum contents, 1,150 acre-ft, Dec. 22 to Jan. 3, Jan. 29 to Feb. 26, elevation, 584.42 ft, Feb. 25.

Capacity table (elevation in feet, and contents, in acre-feet)
(Based on data provided by Santa Barbara County Flood Control District in 1971)

580	890	595	1,940
585	1,180	600	2,380
590	1,540	605	2,840

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230	1190	1170	1150	1150	1210	2410	2380	2340	2290	2220	2140
2	1220	1190	1170	1150	1150	1210	2410	2370	2340	2290	2210	2140
3	1220	1190	1160	1150	1150	1210	2400	2370	2330	2280	2210	2140
4	1220	1190	1160	1160	1150	1210	2400	2370	2330	2280	2210	2140
5	1220	1180	1160	1160	1150	1210	2400	2370	2330	2280	2200	2140
6	1220	1180	1160	1160	1150	1210	2400	2370	2330	2280	2200	2130
7	1220	1180	1160	1160	1150	1210	2400	2370	2330	2270	2200	2130
8	1220	1180	1160	1160	1150	1210	2400	2370	2330	2270	2200	2130
9	1220	1180	1160	1160	1150	1210	2400	2370	2330	2270	2190	2130
10	1210	1180	1160	1160	1150	1210	2400	2370	2330	2270	2190	2130
11	1210	1180	1160	1160	1150	1210	2390	2370	2320	2260	2190	2120
12	1210	1180	1160	1160	1150	1210	2390	2370	2320	2260	2190	2120
13	1210	1180	1160	1160	1150	1210	2390	2360	2320	2260	2180	2120
14	1210	1170	1160	1160	1150	1210	2400	2360	2320	2260	2180	2110
15	1210	1170	1160	1160	1150	1220	2400	2360	2320	2250	2180	2110
16	1210	1170	1160	1160	1150	1220	2400	2360	2310	2250	2180	2110
17	1210	1170	1160	1160	1150	1270	2390	2360	2310	2250	2180	2110
18	1210	1170	1160	1160	1150	1970	2390	2360	2310	2250	2170	2110
19	1210	1170	1160	1160	1150	2280	2400	2360	2310	2250	2170	2100
20	1200	1170	1160	1160	1150	2410	2400	2360	2300	2240	2170	2100
21	1200	1170	1160	1160	1150	2400	2400	2360	2300	2240	2170	2100
22	1200	1170	1150	1160	1150	2400	2400	2360	2300	2240	2160	2100
23	1200	1170	1150	1160	1150	2390	2400	2350	2300	2240	2160	2100
24	1200	1170	1150	1160	1150	2430	2400	2350	2300	2240	2160	2090
25	1200	1170	1150	1160	1150	2430	2400	2350	2290	2240	2160	2090
26	1190	1170	1150	1160	1150	2450	2400	2350	2290	2230	2160	2090
27	1190	1170	1150	1160	1160	2430	2400	2350	2290	2230	2150	2090
28	1190	1170	1150	1160	1180	2400	2390	2350	2290	2230	2150	2080
29	1190	1170	1150	1150	---	2390	2390	2340	2290	2230	2150	2080
30	1190	1170	1150	1150	---	2400	2390	2340	2290	2220	2140	2080
31	1190	---	1150	1150	---	2410	---	2340	---	2220	2140	---
MAX	1230	1190	1170	1160	1180	2450	2410	2380	2340	2290	2220	2140
MIN	1190	1170	1150	1150	1150	1210	2390	2340	2290	2220	2140	2080
a	585.14	584.79	584.54	584.57	584.96	600.38	600.10	599.57	599.01	598.21	597.37	596.67
b	-40	-20	-20	0	+30	+1230	-20	-50	-50	-70	-80	-60

CAL YR 1990 b -420

WTR YR 1991 b +850

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

SANTA YNEZ RIVER BASIN

11128500 SANTA YNEZ RIVER AT SOLVANG, CA

LOCATION.--Lat 34°35'06", long 120°08'37", in San Carlos de Jonata Grant, Santa Barbara County, Hydrologic Unit 18060010, near left bank on downstream end of pier of Alisal Road bridge, 25 ft downstream from Alisal Creek, 0.8 mi southwest of Solvang, and 10 mi downstream from Lake Cachuma.

DRAINAGE AREA.--579 mi².

PERIOD OF RECORD.--October 1928 to November 1936, June 1937 to November 1940 (irrigation seasons only), October 1946 to current year.

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 357.43 ft above National Geodetic Vertical Datum of 1929. Various datums used during period of record. July 29 to Sept. 30, 1953, auxiliary water-stage recorder 750 ft upstream at different datum. Oct. 1, 1953, to Sept. 30, 1968, water-stage recorder at datum 2.00 ft higher. Oct. 1, 1968, to Sept. 30, 1988 water-stage recorder at datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (stations 11121000, 11122000, and 11125500). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water for irrigation pumped from wells along banks of river in valley upstream.

EXTREMES FOR PERIOD OF RECORD (water years 1928-36, 1946-91).--Maximum discharge, 82,000 ft³/s, Jan. 25, 1969, estimated on basis of discharge measurements up to 81,000 ft³/s for Santa Ynez River near Buellton, gage height, 17.1 ft, from floodmark; no flow for several months in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,660 ft³/s, Mar. 19, gage height, 9.10 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	20	.06	.00	46	.00	.00
2	.00	.00	.00	.00	.00	.00	26	.00	.00	48	.00	.00
3	.00	.00	.00	.00	.00	.00	13	.05	.00	46	.00	.00
4	.00	.00	.00	.00	.00	.00	27	.32	.00	46	.00	.00
5	.00	.00	.00	.00	.00	.00	20	.70	.00	49	.00	.00
6	.00	.00	.00	.00	.00	.00	20	.58	.00	58	.00	.00
7	.00	.00	.00	.00	.00	.00	15	.40	.00	53	.00	.00
8	.00	.00	.00	.00	.00	.00	13	.09	.00	57	.00	.00
9	.00	.00	.00	.00	.00	.00	8.9	.00	.00	58	.00	.00
10	.00	.00	.00	.00	.00	.00	9.2	.00	39	33	.00	.00
11	.00	.00	.00	.00	.00	.00	7.3	.00	60	8.0	.00	.00
12	.00	.00	.00	.00	.00	.00	5.2	.00	61	1.5	.00	.00
13	.00	.00	.00	.00	.00	.00	4.0	.00	60	.47	.00	.00
14	.00	.00	.00	.00	.00	.00	3.7	.00	61	.27	.00	.00
15	.00	.00	.00	.00	.00	.00	3.5	.00	64	.19	.00	.00
16	.00	.00	.00	.00	.00	.00	2.4	.00	63	.05	.00	.00
17	.00	.00	.00	.00	.00	.00	1.9	.00	62	.00	.00	.00
18	.00	.00	.00	.00	.00	590	1.6	.00	59	.00	.00	.00
19	.00	.00	.00	.00	.00	1860	1.0	.00	57	.00	.00	.00
20	.00	.00	.00	.00	.00	892	.81	.00	57	.00	.00	.00
21	.00	.00	.00	.00	.00	106	.80	.00	59	.00	.00	.00
22	.00	.00	.00	.00	.00	49	.81	.00	60	.00	.00	.00
23	.00	.00	.00	.00	.00	21	.81	.00	60	.00	.00	.00
24	.00	.00	.00	.00	.00	31	.54	.00	60	.00	.00	.00
25	.00	.00	.00	.00	.00	152	.42	.00	59	.00	.00	.00
26	.00	.00	.00	.00	.00	220	.44	.00	43	.00	.00	.00
27	.00	.00	.00	.00	.00	367	.61	.00	40	.00	.00	.00
28	.00	.00	.00	.00	.00	41	.65	.00	41	.00	.00	.00
29	.00	.00	.00	.00	---	7.1	.64	.00	43	.00	.00	.00
30	.00	.00	.00	.00	---	7.6	.28	.00	42	.00	.00	.00
31	.00	---	.00	.00	---	22	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	4365.70	209.51	2.20	1150.00	504.48	0.00	0.00
MEAN	.000	.000	.000	.000	.000	141	6.98	.071	38.3	16.3	.000	.000
MAX	.00	.00	.00	.00	.00	1860	27	.70	64	58	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.28	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	8660	416	4.4	2280	1000	.00	.00

CAL YR 1990 TOTAL 317.19 MEAN .87 MAX 71 MIN .00 AC-FT 629
WTR YR 1991 TOTAL 6231.89 MEAN 17.1 MAX 1860 MIN .00 AC-FT 12360

SANTA YNEZ RIVER BASIN

279

11129800 ZACA CREEK NEAR BUELLTON, CA

LOCATION.--Lat 34°38'55", long 120°11'00", in San Carlos de Jonata Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 2 ft upstream from bridge on frontage road, 0.9 mi upstream from Dry Creek, 2.4 mi north of Buellton, and 4.0 mi upstream from mouth.

DRAINAGE AREA.-- 32.8 mi².

PERIOD OF RECORD.--September 1963 to September 1981, October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 471.54 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Some pumping from wells along stream for irrigation upstream from station. Small regulation by Zaca Lake, about 15 mi upstream.

AVERAGE DISCHARGE.--20 years, (water years 1964-81, 1991) 0.97 ft³/s, 703 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft³/s, Feb. 24, 1969, gage height, 9.20 ft; maximum gage height, 9.66 ft, Mar. 4, 1978; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 19	0300	*233	*5.20	Mar. 26	1600	139	4.27

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.00	.00	.50	1.1	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.83	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.37	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.17	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.61	.01	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	28	.01	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	87	.01	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	45	.03	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	12	.03	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	4.2	.02	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	4.4	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	15	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	41	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	33	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	4.9	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	2.2	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	1.4	---	.00	---	.00	.00	---
TOTAL	0.01	0.00	0.00	0.00	0.00	293.01	3.43	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	9.45	.11	.000	.000	.000	.000	.000
MAX	.01	.00	.00	.00	.00	87	1.1	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.02	.00	.00	.00	.00	581	6.8	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.01 MEAN .000 MAX .01 MIN .00 AC-FT .02
WTR YR 1991 TOTAL 296.45 MEAN .81 MAX 87 MIN .00 AC-FT 588

SANTA YNEZ RIVER BASIN

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA

LOCATION.--Lat 34°35'19", long 120°24'27", in W 1/2 sec.24, T.6 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060010, on right bank at bridge on Jalama Road, 0.4 mi downstream from El Jaro Creek, and 4.4 mi southeast of Lompoc.

DRAINAGE AREA.--47.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1941 to current year.

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Water-stage recorder and concrete low-water control. Elevation of gage is 220 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--50 years, 9.48 ft³/s, 6,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s, Mar. 15, 1952, gage height, 20.8 ft; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 18	1715	*7,890	*10.86	Mar. 26	1500	564	3.55
Mar. 24	2245	309	2.79				

Minimum daily, 0.03 ft³/s, for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.03	.05	.08	.08	17	e8.0	.72	.26	.17	.11	.05
2	.05	.03	.05	.09	.10	.85	e6.0	.69	.25	.15	.11	.05
3	.04	.03	.06	.11	.10	.34	e4.0	.68	.26	.14	.11	.05
4	.04	.03	.06	.16	.08	.51	3.2	.67	.26	.14	.12	.06
5	.04	.03	.06	.11	.08	1.0	e3.0	.63	.27	.14	.11	.06
6	.05	.03	.06	.13	.08	.32	e2.7	.57	.26	.13	.10	.06
7	.04	.03	.07	.06	.08	.24	e2.5	.56	.24	.13	.10	.06
8	.04	.03	.06	.07	.09	.24	e2.3	.49	.24	.13	.10	.06
9	.03	.03	.06	.08	.10	.23	e2.0	.48	.24	.13	.09	.06
10	.04	.03	.06	.07	.11	.22	e1.8	.48	.24	.14	.10	.06
11	.03	.03	.06	.07	.21	.23	1.6	.42	.24	.14	.09	.06
12	.03	.03	.06	.07	.24	.21	e1.5	.43	.25	.14	.08	.06
13	.03	.04	.06	.07	.24	.29	e1.5	.48	.25	.14	.10	.06
14	.03	.03	.06	.08	.31	.28	e1.4	.49	.22	.14	.08	.07
15	.03	.04	.08	.08	.32	.27	e1.4	.48	.21	.14	.08	.07
16	.03	.04	.07	.08	.32	.28	e1.3	.47	.19	.15	.07	.07
17	.03	.04	.06	.07	.32	.99	e1.3	.43	.18	.15	.07	.07
18	.03	.05	.06	.07	.32	1230	e1.3	.39	.18	.15	.07	.07
19	.04	.05	.07	.07	.32	164	1.4	.39	.17	.15	.07	.07
20	.03	.05	.10	.07	.32	101	1.4	.39	.17	.12	.07	.07
21	.03	.05	.09	.07	.32	93	1.4	.39	.17	.12	.07	.08
22	.03	.05	.08	.07	.32	27	1.3	.38	.17	.11	.06	.09
23	.03	.05	.07	.07	.34	e10	1.2	.37	.17	.12	.06	.09
24	.03	.05	.07	.07	.34	e40	1.1	.32	.17	.13	.06	.09
25	.03	.05	.08	.07	.33	70	.97	.31	.17	.13	.05	.08
26	.03	.06	.07	.07	.35	118	.94	.28	.17	.13	.05	.09
27	.03	.06	.08	.08	.42	85	.94	.27	.18	.12	.05	.10
28	.03	.06	.08	.08	3.1	29	.94	.27	.20	.11	.05	.09
29	.03	.05	.08	.08	---	e15	.80	.28	.21	.10	.05	.09
30	.03	.05	.08	.08	---	e12	.77	.30	.20	.10	.05	.08
31	.03	---	.08	.08	---	e10	---	.32	---	.10	.05	---
TOTAL	1.05	1.23	2.13	2.51	9.34	2125.51	59.96	13.83	6.39	4.09	2.43	2.12
MEAN	.034	.041	.069	.081	.33	68.6	2.00	.45	.21	.13	.078	.071
MAX	.05	.06	.10	.16	3.1	1230	8.0	.72	.27	.17	.12	.10
MIN	.03	.03	.05	.06	.08	.21	.77	.27	.17	.10	.05	.05
AC-FT	2.1	2.4	4.2	5.0	19	4220	119	27	13	8.1	4.8	4.2

CAL YR 1990 TOTAL 62.75 MEAN .17 MAX 17 MIN .03 AC-FT 124
WTR YR 1991 TOTAL 2230.59 MEAN 6.11 MAX 1230 MIN .03 AC-FT 4420

e Estimated.

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA

LOCATION.--Lat 34°38'14", long 120°25'28", in Canada de Salsipuedes Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 0.6 mi upstream from State Highway 246, 1.9 mi east of Lompoc, 1.8 mi downstream from Salsipuedes Creek, and 32 mi downstream from Lake Cachuma.

DRAINAGE AREA.--789 mi².

PERIOD OF RECORD.--May 1947 to November 1951 (irrigation seasons only). May 1952 to September 1963, October 1964 to September 1978, October 1980 to current year. Records equivalent, except for low-flow periods, to those published as "near Lompoc" (station 11133500), November to December 1906, October 1907 to September 1918, May 1925 to September 1960, and October 1978 to September 1980.

GAGE.--Two water-stage recorders. Elevation of main gage is 85 ft (prior to Apr. 10 at datum 5 ft higher) above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1715 for history of changes prior to Oct. 1, 1961. Since Oct. 1, 1961, at various sites and datums within 0.1 mi of present site. Supplementary gage, used for high-water periods, at site 0.6 mi downstream at datum 79.25 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (stations 11121000, 11122000, and 11125500). Water diverted out of Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along banks of river for irrigation in valley upstream.

EXTREMES FOR PERIOD OF RECORD (water years 1952-63, 1964-91).--Maximum discharge, 80,000 ft³/s, Jan. 25, 1969, gage height, 24.20 ft, from supplementary gage; no flow at times in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 9, 1907, reached a stage of 22.0 ft, site and datum then in use, discharge, 120,000 ft³/s, from mean-depth study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,630 ft³/s, Mar. 19, gage height, 7.03 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	78	4.5	.19	22	.00	.00
2	.00	.00	.00	.00	.00	.00	78	4.1	.19	19	.00	.00
3	.00	.00	.00	.00	.00	.00	e54	3.8	.19	18	.00	.00
4	.00	.00	.00	.00	.00	.00	e44	3.5	.19	17	.00	.00
5	.00	.00	.00	.00	.00	.00	e41	3.3	.19	17	.00	.00
6	.00	.00	.00	.00	.00	.00	e39	3.1	.19	17	.00	.00
7	.00	.00	.00	.00	.00	.00	e37	3.0	.19	18	.00	.00
8	.00	.00	.00	.00	.00	.00	e34	2.5	.19	23	.00	.00
9	.00	.00	.00	.00	.00	.00	e28	2.2	.19	22	.00	.00
10	.00	.00	.00	.00	.00	.00	26	1.8	.19	24	.00	.00
11	.00	.00	.00	.00	.00	.00	25	1.5	.19	23	.00	.00
12	.00	.00	.00	.00	.00	.00	22	1.2	.19	12	.00	.00
13	.00	.00	.00	.00	.00	.00	21	1.1	.19	5.0	.00	.00
14	.00	.00	.00	.00	.00	.00	20	.82	.19	2.0	.00	.00
15	.00	.00	.00	.00	.00	.00	18	.59	1.1	1.2	.00	.00
16	.00	.00	.00	.00	.00	.00	17	.45	22	.76	.00	.00
17	.00	.00	.00	.00	.00	21	15	.24	39	.53	.00	.00
18	.00	.00	.00	.00	.00	1150	13	.19	46	.45	.00	.00
19	.00	.00	.00	.00	.00	3470	12	.19	45	.41	.00	.00
20	.00	.00	.00	.00	.00	956	11	.19	42	.34	.00	.00
21	.00	.00	.00	.00	.00	561	10	.19	42	.19	.00	.00
22	.00	.00	.00	.00	.00	158	9.9	.19	41	.16	.00	.00
23	.00	.00	.00	.00	.00	81	9.6	.19	42	.09	.00	.00
24	.00	.00	.00	.00	.00	81	8.3	.19	44	.09	.00	.00
25	.00	.00	.00	.00	.00	401	7.5	.19	46	.08	.01	.00
26	.00	.00	.00	.00	.00	467	6.5	.25	47	.04	.01	.00
27	.00	.00	.00	.00	.00	846	5.8	.33	41	.02	.01	.00
28	.00	.00	.00	.00	.00	344	5.2	.19	30	.02	.01	.00
29	.00	.00	.00	.00	---	199	5.2	.19	25	.01	.00	.00
30	.00	.00	.00	.00	---	135	5.1	.19	23	.01	.00	.00
31	.00	---	.00	.00	---	96	---	.19	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	8966.00	706.1	40.56	578.76	243.40	0.04	0.00
MEAN	.000	.000	.000	.000	.000	289	23.5	1.31	19.3	7.85	.001	.000
MAX	.00	.00	.00	.00	.00	3470	78	4.5	47	24	.01	.00
MIN	.00	.00	.00	.00	.00	.00	5.1	.19	.19	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	17780	1400	80	1150	483	.08	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 10534.86 MEAN 28.9 MAX 3470 MIN .00 AC-FT 20900

e Estimated.

11134800 MIGUELITO CREEK AT LOMPOC, CA

LOCATION.--Lat 34°37'54", long 120°27'50", in Lompoc Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank at upstream end of debris dam and 1,900 ft south of Lompoc Union High School.

DRAINAGE AREA.--11.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1970 to May 6, 1986, October 1987 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 97.94 ft Santa Barbara County Flood Control District datum. Prior to May 6, 1986, on right bank at site 350 ft downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station; some pumping from wells along stream for irrigation.

AVERAGE DISCHARGE.--19 years (water years 1971-85, 1988-91) 1.61 ft³/s, 1,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft³/s, Mar. 18, 1991, gage height, 3.62 ft, from theoretical rating curve above 50 ft³/s; no flow for many days in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 5.83 ft, from floodmark, discharge, 680 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 18	2000	*1,750	*3.62	Mar. 26	1445	232	1.48
Mar. 24	2100	153	1.28				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.02	.02	.00	.05	11	.30	.13	.04	.01	.02	.00
2	.02	.02	.02	.00	.07	1.7	.29	.13	.05	.01	.02	.00
3	.02	.02	.02	.02	.04	1.7	.33	.13	.05	.01	.03	.00
4	.02	.02	.02	.04	.03	3.4	.32	.13	.05	.02	.02	.00
5	.02	.02	.03	.00	.04	1.8	.15	.13	.04	.02	.02	.00
6	.02	.02	.02	.01	.03	1.3	.07	.14	.03	.02	.02	.00
7	.02	.02	.02	.02	.03	1.1	.06	.15	.03	.03	.02	.00
8	.02	.02	.02	.02	.03	1.1	.06	.18	.03	.03	.02	.00
9	.02	.03	.02	.05	.03	1.1	.06	.14	.04	.03	.01	.00
10	.02	.03	.02	.00	.03	1.1	.06	e.14	.03	.03	e.01	.00
11	.02	.03	.02	.00	.03	1.0	.06	e.14	.03	.03	e.01	.00
12	.02	.03	.02	.00	.03	.70	.06	e.13	.03	.02	e.00	.00
13	.02	.03	.01	.00	.03	.93	.06	e.13	.03	.01	.00	.00
14	.02	.03	.00	.02	.03	1.1	.06	e.12	.03	.02	.00	.00
15	.01	.03	.02	.02	.03	1.1	.06	e.12	.03	.02	e.00	.01
16	.02	.03	.02	.02	.03	1.1	.06	e.11	.03	.03	.00	.01
17	.02	.03	.02	.00	.04	37	.06	e.11	.03	.03	.00	.02
18	.02	.03	.02	.02	.03	231	.06	e.10	.03	.03	.00	.03
19	.02	.03	.05	.02	.03	19	.07	e.10	.03	.03	.00	.03
20	.02	.03	.03	.02	.03	22	.09	e.09	.03	.03	.00	.03
21	.02	.03	.01	.02	.03	8.7	.11	e.09	.03	.02	.00	.03
22	.02	.03	.00	.02	.03	2.5	.10	e.08	.03	.01	.00	.03
23	.02	.02	.00	.02	.03	2.4	.12	e.08	.03	.01	.00	.01
24	.02	.02	.00	.02	.03	13	.13	e.07	.03	.01	.01	.01
25	.03	.04	.01	.02	.03	4.5	.15	e.07	.03	.01	.00	.02
26	.03	.02	.01	.03	.03	33	.17	e.06	.03	.01	.01	.02
27	.03	.02	.00	.03	6.0	4.3	.13	e.06	.03	.01	.00	.03
28	.02	.02	.00	.03	3.0	.66	.13	e.05	.03	.02	.01	.03
29	.02	.02	.00	.03	---	.30	.13	e.05	.03	.01	.01	.04
30	.02	.02	.00	.04	---	.14	.13	.05	.02	.01	.00	.03
31	.02	---	.00	.05	---	.11	---	.05	---	.01	.00	---
TOTAL	0.64	0.76	0.45	0.59	9.87	409.84	3.64	3.26	0.98	0.59	0.24	0.38
MEAN	.021	.025	.015	.019	.35	13.2	.12	.11	.033	.019	.008	.013
MAX	.03	.04	.05	.05	6.0	231	.33	.18	.05	.03	.03	.04
MIN	.01	.02	.00	.00	.03	.11	.06	.05	.02	.01	.00	.00
AC-FT	1.3	1.5	.9	1.2	20	813	7.2	6.5	1.9	1.2	.5	.8

CAL YR 1990 TOTAL 80.94 MEAN .22 MAX 11 MIN .00 AC-FT 161
WTR YR 1991 TOTAL 431.24 MEAN 1.18 MAX 231 MIN .00 AC-FT 855

e Estimated.

11134800 MIGUELITO CREEK AT LOMPOC, CA--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1980-86, 1988 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
JAN						
16...	0845	0.01	1570	18.0	7.0	1100
FEB						
07...	1115	0.01	1600	18.2	12.0	1030
APR						
05...	1030	0.10	1860	18.6	20.5	1350
MAY						
09...	1430	0.01	1740	19.0	18.0	1170

SAN ANTONIO CREEK BASIN

11135800 SAN ANTONIO CREEK AT LOS ALAMOS, CA

LOCATION.--Lat 34°44'36", long 120°16'12", in Los Alamos Grant, Santa Barbara County, Hydrologic Unit 18060009, on left bank 100 ft upstream from bridge on northbound lane of U.S. Highway 101 at Los Alamos.

DRAINAGE AREA.--34.9 mi².

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 580 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharge, which are poor. No regulation upstream from station. Pumping for irrigation of about 1,000 acres upstream from station.

AVERAGE DISCHARGE.--21 years, 1.65 ft³/s, 1,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,230 ft³/s, Mar. 1, 1983, gage height, 11.6 ft, from floodmarks, from rating curve extended above 150 ft³/s on basis of computation of peak flow through culverts; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0215	93	2.55	Mar. 24	2245	128	2.80
Mar. 19	0045	*1,460	*7.31	Mar. 26	1545	234	3.37

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	13	e.40	e.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.15	e.20	e.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.08	e.10	e.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	2.1	e.05	e.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.38	e.03	e.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.16	e.02	e.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	e.10	e.01	e.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	e.07	e.00	e.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	e.04	e.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	e.03	e.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	e.02	e.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	e.01	e.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	11	e.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	290	e.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	268	e.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	186	e.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	e54	e.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	9.0	e.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	2.2	e.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	10	e.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	24	e.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	52	e.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.12	28	e.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	3.1	5.1	e.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	2.7	e.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	e1.5	e.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	e.70	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	3.22	960.34	0.81	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.11	31.0	.027	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	3.1	290	.40	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	6.4	1900	1.6	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 16.41 MEAN .045 MAX 5.4 MIN .00 AC-FT 33
WTR YR 1991 TOTAL 964.37 MEAN 2.64 MAX 290 MIN .00 AC-FT 1910

e Estimated.

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA

LOCATION.--Lat 34°46'56", long 120°31'47", in Jesus Maria Grant, Santa Barbara County, Hydrologic Unit 18060009, on Vandenberg Military Reservation on downstream side of San Antonio Road bridge, 0.7 mi east of junction of San Antonio Road and Lompoc-Casmalia Road, and 3.8 mi south of Casmalia.

DRAINAGE AREA.--135 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 27, 1958, at datum 2.00 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Flow affected by pumping from wells along stream for irrigation upstream from station. At times water is released to creek from Vandenberg Air Force Base water-treatment plant.

AVERAGE DISCHARGE.--36 years, 5.66 ft³/s, 4,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,680 ft³/s, Mar. 1, 1983, gage height, 14.32 ft, from rating curve extended above 1,100 ft³/s on basis of slope-area measurement at gage height 12.93 ft; minimum daily, 0.10 ft³/s, June 19, 20, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1915	115	2.88	Mar. 26	2145	797	5.60
Mar. 19	0215	*2,370	*9.82				

Minimum daily, 0.12 ft³/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.19	.25	.34	.40	28	e8.0	1.1	1.1	.51	.85	.38
2	.12	.23	.24	.35	.45	23	e6.0	1.0	1.1	.50	.76	.36
3	.29	.19	.23	.36	.46	6.5	e4.0	1.1	1.1	.51	.72	.30
4	.17	.21	.24	.59	.40	5.4	e3.2	.98	1.1	.51	.69	.34
5	.17	.22	.26	.39	.39	41	3.1	.92	.99	.51	.68	.42
6	.17	.23	.26	.33	.39	11	2.9	.96	.95	.51	.89	.43
7	.17	.21	.26	.34	.38	4.4	2.8	.93	.91	.51	.74	.45
8	.17	.21	.26	.33	.38	2.8	2.4	.84	.97	.55	.61	.38
9	.17	.21	.27	.54	.38	2.1	2.1	.71	.77	.55	.56	.36
10	.17	.21	.26	.44	.38	1.6	2.0	.69	.66	.62	.47	.32
11	.17	.21	.29	.36	.39	1.7	1.9	.65	.66	.57	.50	.32
12	.18	.21	.29	.37	.37	1.3	1.8	.69	.66	.50	.50	.35
13	.17	.20	.29	.37	.39	2.0	2.1	.72	.68	.50	.66	.34
14	.19	.21	.30	.37	.36	1.5	2.0	.72	.64	.51	.50	.33
15	.19	.22	.31	.39	.37	1.3	1.7	.66	.58	.51	.58	.34
16	.19	.23	.29	.39	.38	1.2	1.8	.69	.56	.52	.47	.34
17	.19	.24	.27	.39	.37	12	1.6	.69	.57	.52	.47	.34
18	.19	.23	.28	.40	.37	291	1.5	.76	.54	.51	.52	.32
19	.20	.23	.31	.40	.37	1050	1.3	.74	.54	.53	.61	.31
20	.19	.24	.41	.42	.37	e160	1.4	.78	.56	.50	.58	.30
21	.18	.22	.32	.42	.38	e100	1.4	.87	.58	.48	.55	.30
22	.18	.23	.29	.40	.38	e22	1.3	.91	.57	.49	.57	.31
23	.18	.23	.30	.42	.40	15	1.3	.88	.61	.54	.56	.29
24	.33	.24	.30	.75	.40	18	1.3	.83	.61	.55	.61	.29
25	.21	.25	.30	.34	.38	197	1.1	.95	.61	.57	.53	.29
26	.20	.29	.31	.36	1.6	206	.92	1.0	.57	.59	.53	.31
27	.20	.25	.32	.40	.76	195	.92	.95	.61	.59	.57	.54
28	.21	.25	.32	.40	3.1	30	.92	.91	.58	.57	.46	.35
29	.22	.25	.32	.40	---	18	.92	.97	.57	.54	.40	.36
30	.21	.26	.32	.40	---	e12	1.1	1.0	.56	.53	.37	.41
31	.28	---	.33	.40	---	e10	---	1.1	---	.59	.35	---
TOTAL	6.09	6.80	9.00	12.56	15.15	2470.8	64.78	26.70	21.51	16.49	17.86	10.48
MEAN	.20	.23	.29	.41	.54	79.7	2.16	.86	.72	.53	.58	.35
MAX	.33	.29	.41	.75	3.1	1050	8.0	1.1	1.1	.62	.89	.54
MIN	.12	.19	.23	.33	.36	1.2	.92	.65	.54	.48	.35	.29
AC-FT	12	13	18	25	30	4900	128	53	43	33	35	21

CAL YR 1990 TOTAL 171.68 MEAN .47 MAX 21 MIN .11 AC-FT 341
WTR YR 1991 TOTAL 2678.22 MEAN 7.34 MAX 1050 MIN .12 AC-FT 5310

e Estimated.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.
 CHEMICAL DATA: Water years 1978 to current year.
 pH: December 1981 to September 1983.
 WATER TEMPERATURE: December 1981 to September 1983.

PERIOD OF DAILY RECORD.--
 pH: December 1981 to September 1983.
 WATER TEMPERATURE: December 1981 to September 1983.

INSTRUMENTATION.--Water-quality monitor from December 1981 to September 1983.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
JAN 15...	1515	0.38	2110	7.9	11.0	765	7.2	65	490	130
FEB 06...	1550	0.45	2210	18.0	12.0	760	7.8	73	--	--
APR 04...	0900	3.2	3580	7.7	15.5	775	9.0	90	1300	310
MAY 08...	1420	0.79	3240	17.6	20.0	--	--	--	--	--
JUN 11...	1455	0.58	2670	17.7	20.0	--	--	--	--	--
JUL 10...	1400	0.85	2580	17.8	20.0	--	--	--	--	--
AUG 28...	1405	0.42	2440	7.9	17.0	770	3.6	37	490	130

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD (MG/L AS HCO3)	ALKA-LINITY WAT WH TOT IT FIELD (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)
JAN 15...	39	300	56	6	18	471	386	260	350	0.50	43
FEB 06...	--	--	--	--	--	--	--	--	--	--	--
APR 04...	130	310	34	4	13	237	194	1400	310	1.1	47
MAY 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--	--
AUG 28...	39	340	59	7	18	520	426	270	440	0.40	38

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS Fe)
JAN 15...	1380	1380	1.88	0.880	0.020	0.900	0.070	1.00	1600	60
FEB 06...	1390	--	--	--	--	--	--	--	--	--
APR 04...	2870	2690	3.90	8.09	0.410	8.50	7.20	0.240	2000	50
MAY 08...	2190	--	--	--	--	--	--	--	--	--
JUN 11...	1760	--	--	--	--	--	--	--	--	--
JUL 10...	1580	--	--	--	--	--	--	--	--	--
AUG 28...	1530	1550	2.08	3.42	0.080	3.50	0.170	1.10	2100	20

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MANGANESE, DIS-SOLVED (UG/L AS MN)	PCB, TOTAL IN BOT-TOM MATERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MATERIAL (UG/KG)	ALA-CHLOR TOTAL RECOVER (UG/L)	ALDRIN, TOTAL IN BOT-TOM MATERIAL (UG/KG)	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	DEETHYL ATRA-ZINE, WATER, WHOLE, TOTAL (UG/L)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L)	BROM-ACIL WATER WHLREC (UG/LI)	BUTA-CHLOR WATER WHLREC (UG/LI)
JAN 15...	70	--	--	--	--	--	--	--	--	--	--
FEB 06...	--	--	--	--	--	--	--	--	--	--	--
APR 04...	2600	<1	<1.0	<0.20	<0.1	<0.10	<0.10	<0	<0	<0.2	<0.1
MAY 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--	--
AUG 28...	70	<1	<1.0	--	<0.1	--	--	--	--	--	--

DATE	BUTYL-ATE WATER WHLREC (UG/LI)	CARBOX-IN WATER RECOVERABLE (UG/LI)	CHLOR-DANE, TOTAL IN BOT-TOM MATERIAL (UG/KG)	CHLOR-DYRIFOS TOTAL RECOVER (UG/L)	CYAN-AZINE TOTAL (UG/L)	CYCLO-ATE WATER RECOVERABLE (UG/LI)	DDD, TOTAL IN BOT-TOM MATERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MATERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MATERIAL (UG/KG)	DEF TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
JAN 15...	--	--	--	--	--	--	--	--	--	--	--
FEB 06...	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<0.1	<0.2	<1.0	0.01	<0.20	<0.1	0.1	0.2	0.2	<0.01	<0.01
MAY 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--	--
AUG 28...	--	--	<1.0	<0.01	--	--	0.1	0.1	0.1	<0.01	<0.01

DATE	DI-ELDRIN, TOTAL IN BOT-TOM MATERIAL (UG/KG)	DIPHEN-AMID WATER RECOVERABLE (UG/L)	DI-SYSTON TOTAL (UG/L)	ENDO-SULFAN, TOTAL IN BOT-TOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L)	HEPTA-CHLOR, TOTAL IN BOT-TOM MATERIAL (UG/KG)	HEPTA-CHLOR TOT. IN BOTTOM MATL. (UG/KG)	HEXAZI-NONE WATER WHOLE RECOVERABLE (UG/L)	LINDANE TOTAL IN BOT-TOM MATERIAL (UG/KG)
JAN 15...	--	--	--	--	--	--	--	--	--	--	--
FEB 06...	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<0.1	<0.1	<0.01	<0.1	<0.1	<0.01	<0.0	<0.1	<0.1	<0.2	<0.1
MAY 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--	--
AUG 28...	<0.1	--	<0.01	<0.1	<0.1	<0.01	<0.0	<0.1	<0.1	--	<0.1

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MALATHION, TOTAL (UG/L)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARATHION, TOTAL (UG/L)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	PHORATE TOTAL (UG/L)	PROMETHONE TOTAL (UG/L)
JAN 15...	--	--	--	--	--	--	--	--	--	--	--
FEB 06...	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<0.01	<0.1	<0.01	<0.01	<0.2	<0.1	<0.1	<0.01	<1.00	<0.01	<0.2
MAY 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--	--
AUG 28...	<0.01	<1.0	<0.01	--	--	--	<0.1	<0.01	<1.00	<0.01	--

DATE	PROMETHONE TOTAL (UG/L)	PROPACHLOR WATER WHOLE RECOV. (UG/L)	PROPAZINE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	TERBACIL WATER WHOLE RECOV. (UG/L)	TOXAPHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRIFLURALIN TOTAL RECOVER (UG/L)	TOTAL TRI-THION (UG/L)	VERNOLATE WATER WHOLE RECOV. (UG/L)
JAN 15...	--	--	--	--	--	--	--	--	--	--
FEB 06...	--	--	--	--	--	--	--	--	--	--
APR 04...	<0.1	<0.1	<0.10	<0.10	<0.1	<0.2	<10	<0.10	<0.01	<0.1
MAY 08...	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--
AUG 28...	--	--	--	--	--	--	<10	--	<0.01	--

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA

LOCATION.--Lat 35°01'19", long 120°13'39", SW 1/4 sec.14, T.11 N., R.32 W., San Luis Obispo-Santa Barbara County line, Hydrologic Unit 18060007, on downstream side of bridge on State Highway 166, 1.5 mi downstream from Buckhorn Canyon, and 13 mi northeast of Santa Maria.

DRAINAGE AREA.--886 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1903 to December 1905 (published as Santa Maria River near Santa Maria), October 1959 to current year. Monthly discharge only for October 1903 and July 1904. Yearly estimate for water year 1941 (incomplete), published in WSP 1315-B.

REVISED RECORDS.--WDR CA-71-1: Drainage area. WDR-CA-77-1: 1976.

GAGE.--Water-stage recorder. Elevation of gage is 760 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1959, nonrecording gage at different site and datum.

REMARKS.--No estimated daily discharges. Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation of several thousand acres in Upper Cuyama Valley.

AVERAGE DISCHARGE.--34 years (water years 1904, 1905, 1960-91), 21.1 ft³/s, 15,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft³/s, Feb. 25, 1969, gage height, 13.70 ft, from rating curve extended above 4,900 ft³/s on basis of slope-area measurement at gage height 10.85 ft; maximum gage height, 14.74 ft, Mar. 4, 1978; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1530	968	8.49	Mar. 19	0645	*10,100	*11.77
Mar. 5	0415	291	7.67	Mar. 26	2330	2,670	9.33

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	394	76	5.4	1.9	.99	.42	.18
2	.00	.00	.00	.00	.00	226	55	5.0	1.8	.90	.41	.16
3	.00	.00	.00	.00	.00	17	29	5.0	1.8	.88	.40	.15
4	.00	.00	.00	.00	.00	48	24	4.7	1.8	.88	.40	.17
5	.00	.00	.00	.00	.00	112	24	4.3	1.7	.85	.42	.18
6	.00	.00	.00	.00	.00	21	22	4.1	1.7	.81	.39	.17
7	.00	.00	.00	.00	.00	9.4	20	3.9	1.7	.83	.38	.16
8	.00	.00	.00	.00	.00	3.4	17	3.8	1.6	.83	.35	.17
9	.00	.00	.00	.00	.00	1.3	14	3.9	1.6	.83	.35	.20
10	.00	.00	.00	.00	.00	.55	12	3.8	1.5	.82	.34	.19
11	.00	.00	.00	.00	.00	.31	11	3.6	1.4	.83	.33	.18
12	.00	.00	.00	.00	.00	.19	11	3.5	1.4	.81	.36	.18
13	.00	.00	.00	.00	.00	.22	11	3.5	1.4	.80	.35	.18
14	.00	.00	.00	.00	.00	.12	9.6	3.4	1.3	.75	.38	.19
15	.00	.00	.00	.00	.00	.09	9.0	3.2	1.3	.74	.37	.17
16	.00	.00	.00	.00	.00	.06	8.2	3.0	1.3	.73	.32	.17
17	.00	.00	.00	.00	.00	2.6	7.6	2.9	1.2	.73	.29	.16
18	.00	.00	.00	.00	.00	870	7.3	2.9	1.2	.72	.30	.14
19	.00	.00	.00	.00	.00	3730	8.3	2.9	1.1	.72	.30	.14
20	.00	.00	.00	.00	.00	816	10	2.8	1.1	.69	.30	.12
21	.00	.00	.00	.00	.00	315	9.6	2.7	1.1	.64	.29	.11
22	.00	.00	.00	.00	.00	152	9.0	2.6	1.1	.63	.28	.10
23	.00	.00	.00	.00	.00	114	8.2	2.5	1.1	.60	.26	.10
24	.00	.00	.00	.00	.00	109	8.0	2.1	1.1	.58	.23	.08
25	.00	.00	.00	.00	.00	286	8.3	2.1	1.1	.55	.23	.07
26	.00	.00	.00	.00	.00	485	8.0	2.0	1.2	.52	.24	.08
27	.00	.00	.00	.00	.00	982	7.7	2.0	1.2	.48	.24	.09
28	.00	.00	.00	.00	3.6	188	7.1	2.0	1.2	.47	.23	.09
29	.00	.00	.00	.00	---	104	6.8	2.0	1.3	.46	.21	.07
30	.00	.00	.00	.00	---	83	5.6	2.1	1.2	.43	.21	.06
31	.00	---	.00	.00	---	84	---	2.0	---	.42	.19	---
TOTAL	0.00	0.00	0.00	0.00	3.60	9154.24	464.3	99.7	41.4	21.92	9.77	4.21
MEAN	.0000	.0000	.0000	.0000	.13	295	15.5	3.22	1.38	.71	.32	.14
MAX	.00	.00	.00	.00	3.6	3730	76	5.4	1.9	.99	.42	.20
MIN	.00	.00	.00	.00	.00	.06	5.6	2.0	1.1	.42	.19	.06
AC-FT	.00	.00	.00	.00	7.1	18160	921	198	82	43	19	8.4

CAL YR 1990 TOTAL 685.87 MEAN 1.88 MAX 432 MIN .00 AC-FT 1360
WTR YR 1991 TOTAL 9799.14 MEAN 26.8 MAX 3730 MIN .00 AC-FT 19440

11138500 SISQUOC RIVER NEAR SISQUOC, CA

LOCATION.--Lat 34°50'23", long 120°10'02", in Siquoc Grant, Santa Barbara County, Hydrologic Unit 18060008, on left bank 2.6 mi upstream from La Brea Creek and 7 mi east of Sisquoc.

DRAINAGE AREA.--281 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year. October 1929 to September 1933, at site 0.2 mi downstream; low-flow records not equivalent owing to diversion immediately upstream. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 624.30 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). See WSP 1735 for history of changes prior to Aug. 24, 1951.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--48 years, 42.2 ft³/s, 30,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,200 ft³/s, Dec. 6, 1966, gage height, 15.75 ft, from rating curve extended above 1,700 ft³/s on basis of slope-area measurements at gage heights 10.08 and 15.75 ft; no flow Nov. 11-18, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 11,000 ft³/s, gage height, 8.1 ft, from high-water mark in gage well, at site in use 1929-33, from rating curve extended above 2,800 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	1430	894	4.08	Mar. 19	0415	*6,220	*8.43
Mar. 5	0430	778	3.89				

Minimum daily, 0.22 ft³/s, Sept. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.9	.40	.42	.33	.48	294	267	48	12	3.0	.93	.53
2	e2.6	.40	.40	.33	.52	183	226	46	12	3.0	.96	.43
3	e2.0	.41	.40	.37	.51	53	209	44	11	2.7	.93	.42
4	e1.4	.51	.40	.85	.51	40	212	40	11	2.4	.92	.49
5	e1.2	.51	.40	.60	.51	289	209	35	10	2.2	.92	.47
6	e.90	.51	.40	.48	.65	79	218	32	10	2.1	.83	.47
7	e.80	.48	.40	.40	.80	33	210	30	9.2	2.1	.81	.39
8	e.70	.48	.35	.40	.80	18	e180	29	8.4	2.1	.81	.39
9	e.65	.45	.33	1.0	.82	12	e160	30	8.0	2.1	.82	.43
10	.54	.39	.33	.74	.97	8.6	e140	30	7.5	1.9	.84	.39
11	.53	.40	.33	.62	1.0	7.6	133	28	6.8	1.9	.74	.31
12	.51	.38	.37	.53	1.0	6.5	118	27	6.4	1.6	.82	.52
13	.52	.39	.40	.40	1.0	5.7	108	27	6.4	1.4	.83	.45
14	.70	.40	.34	.38	1.0	7.7	104	26	6.2	1.2	.84	.44
15	.64	.37	.36	.37	1.2	9.0	104	25	5.9	1.1	.81	.44
16	.57	.33	.40	.39	1.2	7.2	100	25	5.6	1.0	.76	.52
17	.54	.33	.40	.37	1.4	8.0	93	25	5.1	1.0	.74	.50
18	.51	.33	.75	.34	1.6	1010	88	23	5.0	.92	.66	.48
19	.48	.34	.65	.29	1.7	2400	83	23	4.2	.91	.54	.48
20	.44	.36	.55	.27	1.9	588	82	22	4.1	.90	.50	.46
21	.46	.38	.51	.27	2.0	407	78	21	4.0	.90	.49	.41
22	.39	.37	.54	.27	2.3	264	74	21	4.0	.92	.47	.33
23	.39	.37	.59	.32	2.3	223	73	20	3.7	.94	.42	.33
24	.36	.37	.64	.33	2.4	215	74	18	3.6	1.0	.41	.35
25	.33	.41	.62	.33	2.6	303	71	16	3.6	1.0	.44	.26
26	.33	.40	.51	.32	2.6	378	66	15	3.6	1.0	.46	.22
27	.33	.44	.49	.33	6.2	532	62	15	3.6	1.0	.46	.38
28	.38	.49	.50	.33	28	350	58	15	3.8	1.0	.48	.35
29	.39	.46	.46	.39	---	303	55	14	3.9	1.1	.43	.28
30	.38	.41	.40	.40	---	272	50	14	3.5	.87	.45	.37
31	.40	---	.38	.41	---	274	---	14	---	.86	.57	---
TOTAL	23.27	12.27	14.02	13.16	67.97	8580.3	3705	798	192.1	46.12	21.09	12.29
MEAN	.75	.41	.45	.42	2.43	277	123	25.7	6.40	1.49	.68	.41
MAX	2.9	.51	.75	1.0	.28	2400	267	48	12	3.0	.96	.53
MIN	.33	.33	.33	.27	.48	5.7	50	14	3.5	.86	.41	.22
AC-FT	46	24	28	26	135	17020	7350	1580	381	91	42	24

CAL YR 1990 TOTAL 485.68 MEAN 1.33 MAX 61 MIN .08 AC-FT 963
WTR YR 1991 TOTAL 13485.59 MEAN 36.9 MAX 2400 MIN .22 AC-FT 26750

e Estimated.

11140000 SISQUOC RIVER NEAR GAREY, CA

LOCATION.--Lat 34°53'38", long 120°18'20", in SW 1/4 sec.36, T.10 N., R.33 W., Santa Barbara County, Hydrologic Unit 18060008, on downstream side of Santa Maria Mesa Road bridge near left bank, 0.6 mi northeast of Garey, and 3.7 mi downstream from Tepusquet Creek.

DRAINAGE AREA.--471 mi².

PERIOD OF RECORD.--October 1940 to current year. Records for water year 1941 incomplete; yearly estimate and monthly discharge only for October 1940 and January 1941, published in WSP 1315-B.

REVISED RECORDS.--WSP 1011: 1941, 1943. WSP 1928: Drainage area.

GAGE.--Two water-stage recorders. Datum of main gage is 354.8 ft, Santa Barbara County datum. See WSP 1735 for history of changes of main gage prior to Oct. 1, 1959. Oct. 1, 1959, to Dec. 30, 1965, at datum 6.00 ft higher. Since Oct. 1, 1959, supplementary gage on downstream side of bridge near right bank at same datum.

REMARKS.--Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation of about 7,000 acres upstream from station.

AVERAGE DISCHARGE.--51 years, 41.9 ft³/s, 30,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,600 ft³/s, Mar. 1, 1983, gage height, 11.16 ft, from rating curve extended above 22,000 ft³/s; maximum gage height, 13.50 ft, Dec. 6, 1966; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 2	unknown	unknown	unknown	Mar. 19	0115	*7,250	*8.31
Mar. 5	1345	366	6.29	Mar. 26	unknown	unknown	unknown

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e300	e360	25	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	e190	e280	24	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	e30	199	22	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	e15	e190	18	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	e272	e175	15	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	e90	e160	11	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	e12	e150	9.9	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	e5.0	e140	6.3	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	e1.0	e125	5.2	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	e.00	e115	6.9	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	e.00	107	6.8	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	e.00	e95	4.7	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	e.00	e80	3.5	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	e.00	e70	1.8	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	e.00	60	.67	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	e.00	72	.05	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	e.00	67	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	1320	60	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	1330	58	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	e1250	59	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	772	56	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	e630	53	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	e590	50	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	e580	51	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e800	51	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	e1250	46	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	e1700	41	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	692	37	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	e610	34	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	e530	27	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	e450	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	13419.00	3068	160.82	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	433	102	5.19	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	1700	360	25	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	27	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	26620	6090	319	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 16647.82 MEAN 45.6 MAX 1700 MIN .00 AC-FT 33020

e Estimated.

11140600 BRADLEY DITCH NEAR DONOVAN ROAD, AT SANTA MARIA, CA

LOCATION.--Lat 34°58'00", long 120°25'00", in NE 1/4 NE 1/4 sec.11, T.10 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060008, on left bank 250 ft upstream from bridge on Donovan Road and 0.2 mi east of U.S. Highway 101 in Santa Maria.

DRAINAGE AREA.--5.47 mi².

PERIOD OF RECORD.--October 1970 to September 1978, October 1979 to current year.

GAGE.--Water-stage recorder on concrete-lined channel. Elevation of gage is 225 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to September 1978, at site 50 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records poor. Extensive channel modification in 1979 water year widened the concrete-lined channel. No regulation upstream from station. Many diversions upstream from station for irrigation during growing season, and some waste water.

AVERAGE DISCHARGE.--20 years, 1.43 ft³/s, 1,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 539 ft³/s, Mar. 1, 1983, gage height, 4.59 ft, from rating curve extended above 69 ft³/s on basis of slope-conveyance studies of discharge; maximum gage height, 5.85 ft, Mar. 4, 1978; no flow for several days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 27	2030	136	2.77	Mar. 20	0245	109	2.59
Mar. 18	2200	*478	*4.38	Mar. 26	1415	153	2.88

No flow Mar. 7-9, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.40	1.1	.86	.94	5.4	.06	.44	.69	.41	.49	.34
2	.03	.64	.30	.34	.29	.13	.02	.29	.21	.14	.71	1.1
3	.33	.59	.65	1.7	.05	.18	.09	.47	.18	.29	.10	.24
4	.42	.58	1.0	4.5	.72	3.6	.38	.58	.32	.92	.07	.29
5	.85	.29	1.6	.16	.26	2.8	.53	.35	.64	.48	.02	.46
6	.20	.15	1.5	.04	.85	.52	1.2	.39	.35	.33	.18	.29
7	.36	.03	2.9	.21	1.1	.00	1.5	.34	.32	.20	.76	.70
8	.35	.19	2.4	.24	.29	.00	1.2	.13	.83	.21	.42	.08
9	.33	2.0	1.7	5.4	.92	.00	.46	.45	.70	.41	.64	.23
10	.85	1.1	.97	.12	.07	.24	.74	.85	.39	.22	.29	.29
11	.84	1.5	1.1	.04	.53	.41	1.1	.56	1.6	.32	.29	.51
12	1.1	.75	1.1	.04	.90	.00	1.1	.18	.64	.13	.15	.29
13	1.0	.98	.83	.01	1.0	1.3	1.0	.55	.24	.74	.39	.82
14	.65	1.7	.81	.02	1.2	.01	.77	.11	2.1	.30	.36	.58
15	.57	.51	2.0	.05	.47	.19	.02	.27	.47	.17	.11	.14
16	.56	1.2	.16	.30	.86	.01	.76	.28	.09	.77	.21	.04
17	.37	1.1	.06	.72	.48	.28	.87	.41	.22	.34	.43	.17
18	.06	.70	.05	.45	.30	132	.48	.22	.57	.04	.27	.82
19	.32	.60	2.0	.76	.12	49	1.1	.20	.44	.27	.71	.54
20	.01	.52	1.4	.57	.18	38	1.1	.13	.80	.14	.25	.37
21	.22	1.2	.18	.06	1.0	3.2	.10	.34	.44	.02	.60	.32
22	.40	1.4	1.8	.05	.17	.17	.12	.30	.21	.06	.05	.34
23	.44	1.3	1.5	.32	.14	.01	.27	.68	.35	.03	.34	.83
24	.46	1.5	1.7	1.3	.73	9.8	.81	.41	.59	.05	1.2	.67
25	1.1	3.4	.72	1.5	.06	10	.27	.45	.49	.17	.91	.05
26	.42	1.3	.08	1.3	.27	54	.56	.67	.36	.44	.15	.04
27	.38	.40	2.1	2.6	7.0	17	1.1	.43	.30	.25	.08	1.3
28	.83	.92	1.9	1.4	3.3	1.1	.19	.15	.17	.63	.56	.95
29	.38	1.1	1.3	1.1	---	.08	.39	.28	.44	.67	.55	1.5
30	.59	.92	1.2	.25	---	.17	.27	.35	.22	.41	.39	.09
31	.46	---	1.8	.78	---	.03	---	.68	---	.33	.82	---
TOTAL	14.96	28.97	37.91	27.19	24.20	357.35	18.56	11.94	15.37	9.89	12.50	14.39
MEAN	.48	.97	1.22	.88	.86	11.5	.62	.39	.51	.32	.40	.48
MAX	1.1	3.4	2.9	5.4	7.0	132	1.5	.85	2.1	.92	1.2	1.5
MIN	.01	.03	.05	.01	.05	.00	.02	.11	.09	.02	.02	.04
AC-FT	30	57	75	54	48	709	37	24	30	20	25	29

CAL YR 1990 TOTAL 257.19 MEAN .70 MAX 6.4 MIN .00 AC-FT 510
WTR YR 1991 TOTAL 573.23 MEAN 1.57 MAX 132 MIN .00 AC-FT 1140

11141050 ORCUTT CREEK NEAR ORCUTT, CA

LOCATION.--Lat 34°53'01", long 120°29'38", in SW 1/4 SE 1/4 sec.6, T.9 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060008, on right bank 10 ft upstream from Black Road bridge, 0.2 mi northeast of State Highway 1, and 3.0 mi northwest of Orcutt.

DRAINAGE AREA.--18.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation or diversion upstream from station. Natural flow affected by pumping and return flow from irrigated areas.

AVERAGE DISCHARGE.--9 years, 1.11 ft³/s, 804 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,830 ft³/s, Mar. 1, 1983, gage height, 7.53 ft, from floodmarks, from rating curve extended above 10 ft³/s on basis of slope-area measurements at gage heights 4.83 and 7.53 ft; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 1	0145	67	4.52	Mar. 18	2030	*286	*9.26
Mar. 4	1745	31	3.80	Mar. 24	2200	97	4.92

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.14	.24	.37	.02	12	.06	.03	.04	.01	.03	.05
2	.02	.00	.61	.03	.05	.17	.06	.04	.03	.00	.02	.00
3	.00	.01	.00	.12	.03	.00	.05	.04	.10	.01	.01	.00
4	.05	.07	.36	.27	.02	5.6	e.05	.04	.08	.01	.01	.02
5	.00	.00	.00	.11	.02	1.0	e.05	.03	.10	.01	.01	.00
6	.08	.08	.22	.04	.02	.00	e.05	.02	.06	.01	.01	.00
7	.17	.00	.00	.06	.02	.00	e.04	.04	.06	.01	.01	.00
8	.00	.00	.34	.10	.02	.00	e.04	.05	.06	.00	.01	.00
9	.18	.24	.67	.46	.02	.00	e.04	.03	.06	.00	.07	.00
10	.00	.53	.00	.10	.02	.00	e.04	.03	.06	.01	.01	.00
11	.30	.00	.15	.14	.01	.00	e.04	.05	.04	.03	.00	.00
12	.00	.26	.02	.56	.01	.00	e.03	.04	.03	.03	.00	.04
13	.18	.32	.41	.18	.01	1.3	e.03	.05	.02	.05	.01	.01
14	.14	.00	.54	.17	.01	.07	e.03	.04	.01	.06	.01	.01
15	.00	.52	.95	.09	.02	.19	e.03	.03	.01	.07	.01	.00
16	.16	.00	.82	.03	.05	.05	e.03	.04	.01	.06	.00	.00
17	.00	.27	.38	.03	.01	28	e.02	.05	.01	.05	.00	.00
18	.08	.27	.16	.04	.26	77	e.02	.07	.01	.05	.00	.00
19	.00	.00	.21	.10	.22	43	e.02	.06	.01	.05	.00	.00
20	.03	.25	.42	.04	.04	30	e.02	.04	.01	.05	.00	.00
21	.09	.00	.03	.04	.02	3.1	e.03	.06	.01	.03	.00	.00
22	.00	.18	.01	.03	.03	1.8	e.03	.04	.01	.03	.00	.02
23	.10	.00	.23	.02	.02	.19	e.03	.04	.01	.03	.00	.03
24	.00	.19	.00	.02	.02	9.9	e.03	.06	.01	.04	.00	.12
25	.16	.42	.01	.02	.03	6.2	e.03	.06	.01	.03	.00	.02
26	.00	.00	.01	.02	.02	24	.03	.07	.02	.03	.00	.01
27	.20	.27	.01	.02	.54	8.9	.04	.05	.03	.03	.00	.01
28	.22	.00	.04	.02	4.5	e1.1	.04	.04	.03	.03	.00	.01
29	.00	.27	.05	.02	---	e.48	.03	.04	.03	.03	.00	.01
30	.07	.00	.02	.01	---	e.12	.03	.04	.05	.03	.02	.01
31	.00	---	.03	.01	---	.05	---	.03	---	.03	.01	---
TOTAL	2.23	4.29	6.94	3.27	6.06	254.22	1.07	1.35	1.02	0.91	0.25	0.37
MEAN	.072	.14	.22	.11	.22	8.20	.036	.044	.034	.029	.008	.012
MAX	.30	.53	.95	.56	4.5	77	.06	.07	.10	.07	.07	.12
MIN	.00	.00	.00	.01	.01	.00	.02	.02	.01	.00	.00	.00
AC-FT	4.4	8.5	14	6.5	12	504	2.1	2.7	2.0	1.8	.5	.7

CAL YR 1990 TOTAL 43.06 MEAN .12 MAX 4.3 MIN .00 AC-FT 85
WTR YR 1991 TOTAL 281.98 MEAN .77 MAX 77 MIN .00 AC-FT 559

e Estimated.

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at miscellaneous sites are given in separate tables.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage station is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current year is given. Information on some lower floods may have been obtained but is not published here. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations during water year 1991

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (ft)	Discharge (ft ³ /s)
Bristol Lake basin							
10253000	Gourd Creek near Ludlow, CA	Lat 34°40'35", long 116°02'20", in SW 1/4 sec.23, T.7 N., R.9 E., San Bernardino County, Hydrologic Unit 18090208, at culvert on U.S. Highway 66, 8.5 mi southeast of Ludlow.	0.30	1979-74, 1976-91	3-28-91	10.81	6.2
10261800	Beacon Creek at Helendale, CA	Lat 34°45'00", long 117°18'53", in SE 1/4 sec.29, T.8 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, at culvert on county road (formerly U.S. Highways 66 and 91), 0.6 mi northeast of Helendale.	.72	1959-60, 1961-67*, 1968-69, 1976-91	a	12.18	a
10262600	Boom Creek near Barstow, CA	Lat 34°54'20", long 116°56'57", NW 1/4 NE 1/4 sec.2, T.9 N., R.1 W., San Bernardino County, Hydrologic Unit 18090208, at culvert on Interstate Highway 15, 4.3 mi east of Barstow.	.24	1956-66, 1967-73*, 1976-91,	3-27-91	8.78	7.8
Antelope Valley							
10263900	Buckhorn Creek near Valyermo, CA	Lat 34°20'35", long 117°55'13", in SW 1/4 sec.15, T.3 N., R.10 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on State Highway 2, Angeles National Forest, 8.1 mi southwest of Valyermo.	.48	1961-66*, 1967-69, 1971-73, 1977-91	3-1-91	1.67	5.5
10264503	Barrel Springs Tributary at California Aqueduct Crossing, near Palmdale, CA	Lat 34°31'56", long 118°04'32", in NW 1/4 SW 1/4 sec.7, T.5 N., R.11 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on California Aqueduct, 0.25 mi upstream of Barrel Springs, and 3.5 mi southeast of Palmdale.	.80	1989-91	3-27-91	10.07	17
10264504	Lake Palmdale Tributary at Highway 14, near Palmdale, CA	Lat 34°31'47", long 118°06'47", in NW 1/4 SW 1/4 sec.11, T.5 N., R.12 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on State Highway 14, 1.75 mi upstream of Lake Palmdale, and 3.25 mi south of Palmdale.	.34	1989-91	3-27-91	3.68	2.4

a Culvert damaged, peak discharge indeterminate.

* Operated as a continuous-record station.

Annual maximum discharge at crest-stage partial-record stations during water year 1991--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (ft)	Discharge (ft ³ /s)
Antelope Valley--Continued							
10264520	Amaragosa Creek Tributary near Leona Valley (formerly "near Palmdale"), CA	Lat 34°37'51", long 118°19'32", in SE 1/4 SE 1/4 sec.2, T.5 N., R.14 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on Elizabeth Lake Road, 2.4 mi northwest of Leona Valley, and 12.5 mi northwest of Palmdale.	0.05	1959-73, 1989-91	3-1-91	4.57	4.4
10264560	Spencer Canyon Creek near Fairmont, CA	Lat 34°46'33", long 118°34'08", in SW 1/4 SW 1/4 sec.15, T.8 N., R.16 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on State Highway 138, 8.5 mi northwest of Fairmont.	3.60	1959-64, 1965-73*, 1974, 1978-91	1-29-80, 3-27-91	11.50, 10.68	b169, 83
10264600	Oak Creek near Mojave, CA	Lat 35°03'00", long 118°21'17", in NE 1/4 NW 1/4 sec.15, T.11 N., R.14 W., Kern County, Hydrologic Unit 18090206, at culvert on Tehachapi-Willow Springs Road, 0.1 mi west of junction with Oak Creek Road, and 10.5 mi west of Mojave.	15.9	1957-86*, 1989-91	3-1-91	e	1.0
10264610	Horned Toad Hills Creek near Mojave, CA	Lat 35°05'19", long 118°11'01", in NW 1/4 SW 1/4 sec.32, T.12 N., R.12 W., Kern County, Hydrologic Unit 18090206, at culvert on Southern Pacific Railroad, 1.5 mi north of junction of State Highways 14 and 58, and 2.2 mi north of Mojave.	.10	1989-91	-- --	--	0
10264650	Bissell Hills Creek at Edwards Air Force Base, CA	Lat 34°53'47", long 117°56'40", in SE 1/4 SW 1/4 sec.4, T.9 N., R.10 W., Kern County, Hydrologic Unit 18090206, at culvert on Rosamond Boulevard, 1.75 mi south of Edwards Air Force Base.	.76	1989-91	3-1-91	7.87	e.50
10264680	Mescal Creek Tributary at Big Pines, CA	Lat 34°22'28", long 117°41'59", in NW 1/4 SE 1/4 sec.3, T.3 N., R.8 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on Angeles Crest Highway 0.7 mi southwest of Big Pines (Angeles National Forest).	.06	1961-73, 1989-91	3-1-91	4.00	.94
Franklin Creek basin							
11119530	Franklin Creek at Carpinteria, CA	Lat 34°24'17", long 119°31'05", in Pueblo Lands of Santa Barbara, Santa Barbara County, Hydrologic Unit 18060013, on right bank 20 ft downstream from Malibu Drive bridge, 0.5 mi north of Carpinteria, and 0.9 mi upstream from mouth.	1.81	1970-78*, 1981-91	3-18-91	3.14	671
Santa Ynez River basin							
11131700	Santa Rita Creek near Lompoc, CA	Lat 34°38'41", long 120°22'09", in Santa Rita Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 2.4 mi upstream from mouth and 6.5 mi east of Lompoc.	14.1	1976-79, 1981-91	3-18-91	6.83	129

b Peak not previously published. Gage height provided by Kern County Department of Planning and Development Services.

* Operated as a continuous-record station.

e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1991--Continued

Station No.	Station name	Location	Drain- age area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (ft)	Discharge (ft ³ /s)
Santa Ynez River basin--Continued							
11133700	Purisima Creek near Lompoc, CA	Lat 34°41'34", long 120°25'51", in Purisima Grant, Santa Barbara County, Hydrologic Unit 18060010, on right bank 1.1 mi northeast of junction of Buener Road and Lompoc- Casmalia Road and 4.0 mi northeast of Lompoc.	4.75	1972-75*, 1976-91	3-18-91	2.29	81
11135200	Rodeo-San Pasqual Creek near Lompoc, CA	Lat 34°38'42", long 120°30'57", in Lompoc Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 0.1 mi east of Dewolf Avenue at Highway 246 and 3.3 mi west of Lompoc.	7.80	1971-72*, 1973-78, 1980-91	3-18-91	4.31	1,080

* Operated as a continuous-record station.

Miscellaneous sites

Discharge measurements in the following table were made at miscellaneous sites throughout the area covered by this volume.

Discharge measurements made at miscellaneous sites during water year 1991

Station No.	Station name	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Antelope Valley						
10263775	Big Rock Wash at Southern Pacific Railroad, near Llano, CA	Lat 34°32'00", long 117°50'41", in NE 1/4 SW 1/4 sec.8, T.5 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, at Southern Pacific Railroad Crossing, 0.75 mi northwest of junction with 165th Street East, and 2.4 mi northwest of Llano.	53.9	1990	10-2-90	0
					11-5-90	0
					12-5-90	0
					1-2-91	0
					1-29-91	0
					3-2-91	1.7
					3-5-91	5.5
					3-8-91	0
					3-18-91	0
					3-29-91	0
					5-6-91	0
					6-5-91	0
					7-8-91	0
					8-15-91	0
10263780	Big Rock Wash at Avenue "T", near Llano, CA	Lat 34°32'33", long 117°50'52", in SW 1/4 SW 1/4 sec.5, T.5 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, at road fords on Avenue "T", 0.8 mi west of 165th Street East, and 3 mi northwest of Llano.	54.2	1990	10-2-90	0
					11-5-90	0
					12-5-90	0
					1-2-91	0
					1-29-91	0
					3-2-91	.04
					3-5-91	7.1
					3-8-91	0
					3-18-91	0
					3-29-91	0
					5-6-91	0
					6-5-91	0
					7-8-91	0
					8-15-91	0
Santa Maria River basin						
345727120375401	Green Canyon Creek at Main Street, near Guadalupe, CA	Lat 34°57'27", long 120°37'54", Santa Barbara County, Hydrologic Unit 180060008, at culvert on West Main Street, 3.6 mi southwest of Guadalupe. Tributary to Santa Maria River.	--	1984-89	*10-5-89	11.1
					*11-6-89	2.24
					*11-29-89	6.58
					*1-3-90	1.33
					*2-13-90	4.01
					*3-12-90	4.72
					*4-10-90	11.3
					*5-8-90	3.99
					*6-4-90	3.51
					*7-10-90	8.19
					*7-30-90	5.18
					*9-6-90	8.58
					10-10-90	14.1
					11-6-90	6.09
					12-4-90	6.15
					1-14-91	.70
					2-5-91	1.24
					4-2-91	35.6
					5-6-91	4.62
6-10-91	3.26					
7-9-91	6.35					
8-13-91	6.25					
9-4-91	7.68					

* Not previously published.

SAN LUIS REY RIVER BASIN

331942117035301 WEST FORK BUBBLE-UP CREEK NEAR PALA, CA

LOCATION.--Lat 33°19'42", Long 117°03'53", in NE 1/4 NE 1/4 sec.11, T.10 S., R.2 W., San Diego County, Hydrologic Unit 18070303, approximately 0.1 mi above West Fork Tributary, 1.7 mi upstream of Lilac Road and 2.5 mi south of Pala.

DRAINAGE AREA.--0.74 mi².

PERIOD OF RECORD.--

CHEMICAL DATA: March 1991.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS TOTAL (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	
MAR												
08...	1345	1850	8.2	15.0	--	690	150	76	110	26	2	3.1
19...	1015	1370	8.0	12.0	220	490	110	53	87	28	2	3.1
21...	1100	1080	8.4	12.0	130	390	86	43	84	32	2	2.6

DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
MAR											
08...	219	300	300	<0.10	36	1180	1140	1.60	--	0.060	--
19...	158	240	180	0.10	33	908	844	1.23	0.060	0.060	9.90
21...	128	180	140	0.10	33	642	680	0.87	0.040	0.030	6.90

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
MAR											
08...	7.20	--	0.020	--	--	--	--	0.030	70	6	78
19...	9.70	0.010	<0.010	1.3	0.110	0.060	0.050	0.030	70	--	--
21...	7.80	0.020	0.010	1.5	0.140	0.060	0.050	0.040	60	--	--

SAN LUIS REY RIVER BASIN

332026117040001 BUBBLE-UP CREEK BELOW WEST FORK TRIBUTARY, NEAR PALA, CA

LOCATION.--Lat 33°20'26", long 117°04'00", SW 1/4 NE 1/4 sec.2, T.9 W., R.2 W., San Diego County, Hydrologic Unit 18070303, 0.9 mi upstream of Lilac Road and 1.6 mi south of Pala.

DRAINAGE AREA.--3.44 mi².

PERIOD OF RECORD.--

CHEMICAL DATA: March 1991.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAR												
08...	1405	2110	8.0	15.0	--	860	180	100	150	27	2	3.1
19...	1045	1350	8.1	12.0	330	460	100	51	93	30	2	2.6
21...	1130	1160	8.2	11.5	77	380	82	43	73	29	2	2.6

DATE	ALKA- LINTY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
MAR											
08...	243	390	370	0.30	42	1380	1400	1.88	--	0.040	--
19...	137	270	180	0.20	30	866	839	1.18	0.040	0.030	7.10
21...	119	220	150	0.20	32	733	708	1.0	0.050	0.040	7.20

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
MAR											
08...	4.60	--	0.030	--	--	--	0.030	70	10	170	
19...	6.80	0.020	0.020	1.3	0.140	0.050	0.040	0.030	60	--	--
21...	7.60	0.030	<0.010	0.90	0.090	0.060	0.050	0.040	60	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SANTA MARIA RIVER BASIN

345727120375401 GREEN CANYON CREEK AT MAIN STREET, NEAR GUADALUPE, CA

LOCATION.--Lat 34°57'27", Long 120°37'54", Santa Barbara County, Hydrologic Unit 18060008, at culvert on West Main Street and 3.6 mi southwest of Guadalupe.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1986 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED SATUR-ATION (%)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	
APR 02...	1515	36	914	7.7	19.0	775	8.8	94	280	65	
16...	1055	--	--	--	13.0	--	--	--	--	--	
AUG 13...	1025	6.3	2380	7.8	20.5	--	--	--	1100	260	
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM SODIUM RATIO PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD (MG/L AS HCO3)	ALKA-LINITY WAT WH TOT IT FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
APR 02...	29	67	33	2	7.2	132	108	170	76	0.30	13
16...	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	120	160	23	2	6.8	422	346	870	200	0.40	26
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	
APR 02...	523	541	0.71	9.02	0.180	9.20	4.40	0.750	150	92	
16...	--	--	--	--	--	--	--	--	--	--	
AUG 13...	--	1960	2.67	23.2	0.770	24.0	0.950	0.450	330	30	
DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALA-CHLOR TOTAL RECOVER (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	AME-TRYNE TOTAL	DEETHYL ATRA-ZINE, TOTAL (UG/L)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L)	BROM-ACIL WATER WHLREC (UG/L)	BUTA-CHLOR WATER WHLREC (UG/L)	
APR 02...	100	<1	<1.0	--	<0.1	--	--	--	--	--	
16...	--	--	--	<0.20	--	<0.10	<0.10	<0	<0	<0.2	
AUG 13...	70	<10	<10	<0.10	<1.0	<0.10	<0.10	<0	<0	<0.2	
DATE	BUTYL-ATE WATER WHLREC (UG/L)	CARBOX-IN WATER WHOLE RECOV-ERABLE (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DYRIFOS TOTAL RECOVER (UG/L)	CYAN-AZINE TOTAL (UG/L)	CYCLO-ATE WATER WHOLE RECOV-ERABLE (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DEF TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
APR 02...	--	--	<10	0.06	--	--	14	20	8.2	<0.01	0.05
16...	<0.1	<0.2	--	--	<0.20	<0.1	--	--	--	--	--
AUG 13...	<0.1	<0.2	<10	0.04	<0.20	<0.1	9.0	25	10	<0.01	0.38

SANTA MARIA RIVER BASIN

345727120375401 GREEN CANYON CREEK AT MAIN STREET, NEAR GUADALUPE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	DI-ELDRIN, TOTAL IN BOT-TOM MATERIAL (UG/KG)	DIPHEN-AMID WATER WHOLE RECOVERABLE (UG/L)	DI-SYSTON TOTAL (UG/L)	ENDO-SULFAN, TOTAL IN BOT-TOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L)	HEPTA-CHLOR, TOTAL IN BOT-TOM MATERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	HEXAZI-NONE WATER RECOVERABLE (UG/L)	LINDANE TOTAL IN BOT-TOM MATERIAL (UG/KG)
APR 02...	0.9	--	<0.01	0.5	1.0	<0.01	0.0	<0.1	<0.1	--	<1.0
16...	--	<0.1	--	--	--	--	--	--	--	<0.2	--
AUG 13...	1.0	<0.1	<0.01	<1.0	1.0	<0.01	<0.0	<1.0	<1.0	<0.2	<1.0

DATE	MALATHION, TOTAL (UG/L)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L)	MIREX, TOTAL IN BOT-TOM MATERIAL (UG/KG)	PARATHION, TOTAL (UG/L)	PER-THANE IN BOT-TOM MATERIAL (UG/KG)	PHORATE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)
APR 02...	<0.01	<0.1	<0.01	<0.01	--	--	<0.1	<0.01	<10.0	<0.01	--
16...	--	--	--	--	<0.2	<0.1	--	--	--	--	<0.2
AUG 13...	<0.01	<10	<0.01	--	<0.1	<0.1	<1.0	<0.01	<10.0	<0.01	<0.2

DATE	PROMETHYNE TOTAL (UG/L)	PROPACHLOR WATER WHOLE RECOV. (UG/L)	PROPAZINE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETHYNE TOTAL (UG/L)	TERBACIL WATER WHOLE RECOV. (UG/L)	TOXAPHENE, TOTAL IN BOT-TOM MATERIAL (UG/KG)	TRIFLURALIN TOTAL RECOVER (UG/L)	TOTAL TRI-THION (UG/L)	VERNOLATE WATER WHOLE RECOV. (UG/L)
APR 02...	--	--	--	--	--	--	90	--	<0.01	--
16...	<0.1	<0.1	<0.10	<0.10	<0.1	<0.2	--	<0.10	--	<0.1
AUG 13...	1.4	<0.1	<0.10	<0.10	<0.1	<0.2	100	<0.10	<0.01	<0.1

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1 2.54×10^{-2}	millimeters (mm) meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3 4.047×10^{-1} 4.047×10^{-3}	square meters (m ²) square hectometers (hm ²) square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0 3.785×10^0 3.785×10^{-3}	liters (L) cubic decimeters (dm ³) cubic meters (m ³)
million gallons	3.785×10^3 3.785×10^{-3}	cubic meters (m ³) cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1 2.832×10^{-2}	cubic decimeters (dm ³) cubic meters (m ³)
cfs-days	2.447×10^3 2.447×10^{-3}	cubic meters (m ³) cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3 1.233×10^{-3} 1.233×10^{-6}	cubic meters (m ³) cubic hectometers (hm ³) cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1 2.832×10^{-2} 2.832×10^{-2}	liters per second (L/s) cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2} 6.309×10^{-2} 6.309×10^{-5}	liters per second (L/s) cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1 4.381×10^{-2}	cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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